THE IMPACT OF BEHAVIOR MANAGEMENT TRAINING ON TEACHER AND
STUDENT BEHAVIOR

by

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(Under the Direction of William W. Swan)

ABSTRACT

The purpose of the study was to determine if teacher knowledge and skills on behavior
management could be increased in third and fourth grade classrooms in a metropolitan area using
Project PEGS!, a CD-rom training tool developed by Wood at the University of Georgia. A total
of 18 teachers from two respective schools in low and high socioeconomic areas participated in
the study. Socioeconomic status was determined by student participation in the free and reduced
lunch program. Data were gathered via direct observation prior to and following participation in
the intervention to record instances of intervention, quality rating scores, and the number of
negative child responses to teacher behavior. The number of office and SST referrals issued
prior to and following participation in the intervention were also reported. Student variables
considered in the study included socioeconomic status, grade level, and sex. Significant
differences were observed in mean scores for all participants when comparing pre to post
observation data. Significant differences in post observation data were not observed when
comparing the means of the identified sub groups.

INDEX WORDS: Behavior management, grade level, Project PEGS!, socioeconomic status,
office referrals, SST referrals, sex.
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DEDICATION

The completion of this work is dedicated first and foremost to my husband, Mark. He has selflessly allowed me to pursue my personal ambitions consistently willing to provide me with the time and space needed to accomplish the task at hand. He has so eloquently expressed his faith in me in my most desperate moments when I no longer believed in myself. He is the most perfect living example of love and patience that I have ever known. I realize that without him the life I lead would not be possible. As the song goes, he is truly “the best thing that has ever happened to me”.

I also dedicate this work to my son, Ryan. I will always be grateful for the sacrifices you have made at such a young age given no choice. The image of your three-year-old little body running after me begging me not to go as the car drove away will forever be etched in my mind. You have allowed your Mommy to achieve one of my utmost dreams. I can only hope that I repay you by running alongside to cheer you on as you joyfully chase your own. You are a strong and beautiful young man.

I also dedicate this work to my daughter, Abbey. It is my hope that this accomplishment inspires you to discover your own intellect and power. I also hope that by watching your Dad and I stick together even when things get tough you have seen the value in finding a companion who truly loves you and believes in your abilities. I do hope that throughout your life my accomplishments are constant reminders of the beauty and strength that you possess as a girl and eventually a woman.

I dedicate this work to my daughter, Kylee. Your love and constant smile has encouraged me to be a much better person. When I look in your eyes, I am challenged to put
forth my best effort in all that I do and to drink in the joy of life. You are so blessed to have a
family that adores you. It is my hope that I am able to consistently inspire you throughout your
life to never accept defeat, always find hope, and make every decision based upon love. You are
gracious and beautiful.

Finally, I wish to dedicate this work to the students that have occupied my classroom
and filled my heart over the past eleven years. You were the inspiration for the study and will
continue to be for those conducted in the future. It is my greatest hope that my academic
pursuits will impact the educational system within which I work to the point that positive
changes take place for those students with small voices; those who do not know how to speak
for themselves and often go unheard when they do.
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CHAPTER I

INTRODUCTION

Since the Education of All Handicapped Children Act (P.L. 94-142) enacted by Congress and the President in 1975, educators in the public schools have been challenged to educate youngsters with disabilities in the least restrictive environment to the maximum extent possible. Likewise, it has been anticipated that educators in the public schools are adequately trained in the areas of academic instruction and behavior management to assist all students in performing to their maximum potential. In addition to general classroom management, every teacher should have received training regarding the individualization of academic instruction as well as behavior intervention. As a result, each classroom teacher has been given the responsibility of referring students who need additional assistance in performing effectively in the regular education setting. Ideally, all students are to have been treated in a fair manner regardless of personal biases on the part of the instructor.

Special education classes designed for students with emotional/behavioral disorders have consisted primarily of boys who comprise approximately 80% of that population. These children have frequently been referred at the third and fourth grade levels as demands placed on them have become significantly more strenuous. Research has indicated that young males progress slower developmentally in understanding abstract versus concrete concepts as well as acquiring reading and affective coping skills as opposed to their female counterparts. Male students who may already be considered to be at risk academically have been considered to be more susceptible to failure than their female counterparts who appear more adept regarding holistic learning techniques often
used in written and verbal language as well as coping with the interpersonal issues associated with the school environment (Thompson, 2001; Yarborough & Johnson, 1980).

As a result of apparent discrepancies among the performance of students, it has become essential to educational leaders to be aware of the teacher characteristics and behavior that contribute to the referral of students with behavioral and academic problems to the administrative office as well as Student Support Team (SST). The Georgia Department of Education identifies SST as a “problem-solving process in which the purpose is to find ways around roadblocks to success for any student referred to it” (GDOE, 2004). The SST process has become more important due to increased emphasis on Section 504 of the Rehabilitation Act of 1973, recognition that circumstances beyond academics play a role for students who are at risk for failure, increased emphasis on school-based management and problem solving, and emphasis on the collective wisdom of a group of individuals to increase teacher skills in the area of behavior management to improve school safety.

The State Board of Education Rule (GPSC, 2002) states that the following support services may be provided to students: 1) alternative education programs, 2) counseling, 3) guidance, 4) school climate management, 5) school counseling and guidance services, 6) health services, 7) psychological services, and 8) social work. Therefore, leaders have been given the responsibility of maximizing teacher knowledge and skills in behavior management as well as in other areas of education to minimize the need for additional student assistance outside the general classroom setting.
An initial investigation of the current research suggested that significant emphasis has been placed upon the study of gender differences regarding cognitive processing and how those differences impact school performance. While some researchers have focused on demographic characteristics, few have addressed the differing knowledge and skills of teachers crossing gender and socioeconomic backgrounds regarding behavior management and its impact on the performance of students in schools. In addition to its relevance to student achievement, discipline has begun to be viewed as a serious issue to be addressed as evidenced in the establishment of zero tolerance policies and other programs across the nation. Contradictory to the value placed upon these issues in public education, behavior management has been an issue rarely addressed in depth in traditional teacher training programs. Project PEGS! (Wood, 2000) (hereafter referred to as Project PEGS!) is an interactive CD-ROM training tool that has been developed to provide practice in effective teacher guidance strategies to decrease problem behaviors in the classroom. The findings obtained in this study may be significant as they may provide educators with further insight into possible determining factors of office and SST referrals and research based results through which the numbers might be reduced resulting in a more effective education for all students.

Research Questions

Nine questions were addressed in the study:

1) Would there be a statistically significant difference in pre and post observation scores (instances of ignoring, frequency of interventions, quality rating scores, negative child responses) for all participants before and after teacher participation in Project PEGS!?
2) Would there be a statistically significant difference in pre and post observation scores (instances of ignoring, frequency of interventions, quality rating scores, negative child responses) in high and low SES areas respectively before and after teacher participation in Project PEGS?!

3) Would there be a statistically significant decrease in the mean number of office referrals in high and low SES areas respectively following teacher participation in Project PEGS!?

4) Would there be a statistically significant decrease in the mean number of SST referrals in high and low SES areas respectively following teacher participation in Project PEGS!?

5) Would there be a statistically significant difference in pre and post observation scores (instances of ignoring, frequency of interventions, quality rating scores, negative child responses) among teachers with various communication styles before and after teacher participation in Project PEGS!?

6) Would there be a statistically significant decrease in the mean number of office referrals in the third and fourth grade respectively following teacher participation in Project PEGS!?

7) Would there be a statistically significant decrease in the mean number of SST referrals in the third and fourth grade following teacher participation in Project PEGS!?

8) Would there be a statistically significant decrease in the mean number of office referrals received by boys and girls respectively in the third and fourth grade following teacher participation in Project PEGS!?
9) Would there be a statistically significant decrease in the mean number of SST referrals received by boys and girls respectively in the third and fourth grade following teacher participation in Project PEGS!?

Statement of the Problem

The problem of the study was to examine effective ways to increase teacher knowledge and skills regarding behavior management in elementary schools. Following participation in Project PEGS!, scores in the areas of instances of ignoring, instances of intervention, quality rating scores, and negative child responses were compared to the number calculated prior to the intervention. In addition, performance on Project PEGS! was linked to the number of office referrals and referrals to Student Support Team (SST) as well as teacher communication style to determine if a correlation existed. The number of office and SST referral rates prior to and following participation in Project PEGS! were also analyzed according to student grade level and sex.

Rationale for the Study

Reitz and Kerr (1991) identified five major features of effective schools. They included the following: a) active instructional leadership and participation by faculty in the decision-making process, b) active involvement on the part of the parents and the community, c) a strong commitment to all children including those who are minorities or are at-risk, d) a commitment to being held accountable for the outcomes of their instruction, and e) highly qualified as well as highly skilled teachers. Fueyo (1991) stated that typical teacher preparation programs have placed emphasis on developing a knowledge base but very little time teaching the classroom and behavior management skills that will enable teachers and administrators to apply that knowledge in educational settings.
Classroom and, more specifically, behavior management will become increasingly more important given the changing student population. Reitz and Kerr (1991) stated:

changes resulting from the Regular Education Initiative will require modifications in both the content of those courses and the range of teachers who need to develop skills in these areas. First, as more and more students requiring special intervention for behavioral difficulties are placed in regular classes in their local public schools, it has become clear that teachers in all classrooms will need to possess skills in the management of troublesome behavior. Thus, teacher training programs at all levels will need to begin including coursework and practicum experiences that develop the needed behavior management skills in their trainees. (pp. 363-64)

The skills taught in the new training programs need to incorporate interventions that can be readily implemented in general classroom settings including “increased attention to self- and peer-managed programs, group-oriented interventions, and management of antecedent events, as opposed to the more typical emphasis on teacher-controlled, individual programs” (Reitz & Kerr, 1991, p. 364).

According to a recent study of training programs in the state of Georgia, most have not adequately prepared future educators in the areas of individual and group behavior management (Grizzard, 2002). Variables analyzed included the total number of hours in the professional program, number of hours in which students were required to participate in courses which mentioned the term “classroom management” or specified students with special needs, and the language used to describe the courses offered. The current undergraduate bulletins were used to gather the data. Of the colleges and universities with teacher preparation programs, it was found that Valdosta State University and the University of Georgia provided teachers with the most training in classroom management and addressing students with special needs reporting nine and
seven hours respectively. All other institutions, with the exception of one, offered programs that provided only one three-hour course discussing classroom management and one three-hour course addressing students with special needs totaling six hours. Georgia College and State University was the only exception requiring five hours total in these two areas. Three hours focused on children with special needs and two hours focused on managing the classroom.

The Georgia Professional Standards Commission requires that an individual receiving a degree in the field of Early Childhood Education must complete three semester hours in each of the following areas: 1) human growth and development, 2) general curriculum/methods for early childhood education or a college-supervised practicum/internship, 3) communication arts for the young child, 4) socio-behavioral sciences for the young child, 5) creative arts for the young child, 6) science for the young child, 7) mathematics for the young child, and 8) health and physical education for the young child. Although researchers have pointed out the knowledge and skills that have become absolutely necessary for academic advancement in young children, education has not identified necessary teacher knowledge and skills in the area of behavior management as it relates to general classroom application.

Purpose of the Study

The purpose of the study was to determine if teacher knowledge and skills on behavior management could be increased in third and fourth grade classrooms in a metropolitan area using Project PEGS!. The number of office and SST referrals made prior to and following participation in Project PEGS! were also compared to determine the impact of teacher performance on other outcomes of student behavior. Gwinnett
County (Georgia) Public Schools is one of the largest school systems in the country with an enrollment of well over 120,000 students. In addition to a continually increasing student population, the schools have begun experiencing great change regarding student demographic characteristics. According to the Georgia Public Education Report Cards for Gwinnett County published by the Georgia Department of Education (GCPS, 2004), students eligible to receive free or reduced-price lunches has increased from 16.4% in the 1998-99 school year to 20.8% in the 2000-2001 school year. Likewise, the special education population has risen from 9.8% to 10.6% or 9,670 in grades K-12 in 1998-1999 to 11, 572 in 2000-2001. Those enrolled in English to Speakers of Other Languages (ESOL) programs have also increased from 3.9% to 6.5%. The number of White students retained has decreased from 56.6% to 46.6% whereas the number of black students retained has increased from 21.1% in 1998-1999 to 24.4% in 2000-2001. Likewise, the proportion of Hispanic students retained has increased from 14.1% to 19.4% in the same years respectively. In 2000-2001, 64.2% of those retained were male and 39.6% were female. Approximately 65% of those receiving special education diplomas were boys and 34.7% were girls in the 2000-2001 school year although total enrollment was 51.2% male and 48.8% female.

As the student population in Gwinnett County has become increasingly diverse, it has become clear that particular groups of those enrolled remain at a disadvantage regarding academic achievement. Boys have continued to experience less success in the school environment as evidenced by greatly disproportionate rates of retention and distribution of special education diplomas when compared to girls. As academic retention rates among all minority populations have risen while those among white
students have fallen, it has also become apparent that students of varying ethnicity are also at a disadvantage. Wong, Kaufmann, and Lloyd (1991) emphasized that regular classroom teachers must be taught the skills necessary to effectively manage classroom behavior on an individual basis as well as with the group as a whole so that the most optimal educational outcomes are achieved for all populations regardless of gender, ethnicity, poverty, ESOL, or disability. Four primary areas of skills included classroom management and discipline, appropriate feedback during instruction, academic instructional appropriateness, and a supportive environment for each individual child.

The most recent reauthorization of the Elementary and Secondary Education Act known as No Child Left Behind Act (2002) recently passed by the federal government and the A+ Plus Education Reform Act (2000) recently passed by the state of Georgia clearly state that educators are required to reach all students manifested as gains in standardized test scores despite the educational setting in which the child is placed. As a result of continuous office or SST referrals, students have frequently been referred to special education as well as retained in the elementary years. Both outcomes have often proved non-advantageous for many individual students. Therefore, it has become imperative that teachers of this age group acquire effective skills in the area of behavior management in regard to students to maximize academic success.

Project PEGS!

Project PEGS! (Woods, 2000) is a CD-Rom training tool that uses individualized and group instructional scenarios to facilitate the effective utilization of preventative behavior management techniques including positive encouragement, motivation with materials, and management of materials, structure reminders, and rules reminders”.

Strategies that decreased the likelihood of behavior escalation included physical proximity, positive reflection, redirection or restructuring, and interpretation of a student’s feelings based on his/her words or actions. Strategies incorporated into the training tool that attempted to control disruptive behavior included confrontation or the utilization of authority by a respected individual, time out within the classroom setting, and removal from the classroom setting.

Behavior management is identified as the use of management techniques that modify the behavior of individual students based upon teacher awareness of the antecedents of student behavior and the consequences of action taken by the teacher (Kerr & Nelson, 1989; Swaggart, 1998).

Classroom management is defined as the rules, guidelines, and standards that a teacher sets forth for all students in the classroom setting (McDaniel, 1994; Snyder, 1998).

Limitations of the Study

There were five limitations to the study:

1) The sample of teachers included only those from a metropolitan area of a major city.

2) The sample of teachers included only those in third and fourth grade.

3) There was no control group to address the possible influence of confounding variables on the relationship between independent and dependent variables.

4) It was assumed that the SELF Profile accurately reflected the communication style of the participants.
5) Due to the supportive nature of the SST process, it was not a goal of the study to eliminate referrals but to limit them to those necessary.

6) The mean number of office or SST referrals was limited because students may have already received office or SST referrals to address behavioral issues earlier in the school year prior to teacher participation in the Project PEGS! producing a decrease in referrals later on during the collection of follow-up data.

Organization of the Study

The four chapters that follow comprise the remainder of the study. Chapter II consists of a review of the literature. As there is very little information relating specific behavior management techniques on the part of teachers to academic achievement, this chapter provides an overview of developmental theory, teacher characteristics, and teacher preparation programs in Georgia, student characteristics, referrals in public education, and sex and referrals in public education.

Chapter III describes the methodology used throughout the study including restatement of the problem, statements of the hypotheses, demographic information, research design including dependent and independent variables, instrumentation utilized, validity, reliability, level of significance, and statistical analyses.

Chapter IV presents an overview of the data collected and describes the results obtained. Chapter V summarizes the results as the data relate to the literature reviewed. Conclusions are provided along with implications for the field of education. Specifically, ways in which the information may be most aptly applied to assist students in achieving academically are addressed. Finally, recommendations for further research are made.
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

The classroom is an extremely complex learning environment requiring great skill and training on the part of the educator to adequately motivate and manage students to achieve academic success. According to a bulletin published by the Educational Research Service in January of 2002, “nearly half of new teachers leave teaching after five years in the state where they began teaching” (p.1). In the same report, it was noted that nationally 30 percent of new teachers leave the field by the end of their fifth year in the profession identifying as a primary reason a lack of appropriate training in the areas of classroom management and student discipline. Previous reports have concurred with present findings with some reporting as many as 60% of beginning teachers leaving the profession within the first five years and 30% within the first two (Fueyo, 1991). The demands placed upon teachers by the federally mandated NCLB Act (2002) and the state-mandated A+ Education Reform Act (2000) to reach all students evidenced by annual increases in standardized test scores have magnified the challenges faced by teachers.

Without the retention of well-trained and highly skilled educators, it has become more difficult for students to steadily increase achievement in the classroom. Research (Katsiyannis, Ellenburg, & Acton, 2000) has suggested that little time and attention has been devoted to classroom, and more specifically behavior, management cited as the very components of teaching that are problematic according to teacher reports. Until educators have received proper training in these areas, discouraged teachers and
problematic behaviors on the part of students will continue to make high levels of student achievement a near impossibility as they negatively impact the complex learning environment of the classroom.

A review of the literature suggested that significant emphasis has been placed on the student achievement of boys and girls as it relates to inherent cognitive ability and processing of information (Eliot & Fralley, 1976; Finn, Dulberg, & Reis, 1979; Levine & Ornstein, 1983; Mullis & Bornhoef, 2001; Patterson, Kupersmidt, & Vaden, 1990). Yet, very few researchers have analyzed the impact of behaviors presented in the classroom on individual and group student achievement. An inability on the part of the educator to sufficiently manage varying student behaviors has often led to student removal from the classroom and therefore lost opportunity to acquire knowledge and skills thereby decreasing the likelihood of increased student achievement (Soodak, 2003). If appropriate student behavior has not been maintained, it becomes impossible for the teacher to conduct activities that encourage student success.

Developmental Theory

To more aptly understand cognitive processing and behavior during childhood, research has often focused on developmental theory. Theories of childhood development have been used to explain the behavior of children as it relates to achievement, motivation, and social relationships within and outside of the school setting. Major theorists regarding child development have included Gesell, Piaget, Vygotsky, Kohlberg, and Erikson (Miazga, 2000).

Gesell set forth two primary notions regarding maturation. First, the child’s ability to mature is determined by his or her own individual genetic composition.
Second, maturation has always been a process directed primarily by internal forces. He insisted that the surrounding environment must address the needs of individual students while providing a framework of standards to which the child must be held. Individuals may appear inflexible and resistant to change as the individual has attempted to establish a balance that has been lost due to forced compliance. In other words, no individual may be pushed forward beyond his or her current level of ability until naturally prepared to do so (Miazga, 2000).

Piaget’s Cognitive Development Theory has long been integrated into analyses of developmental theory. According to Piaget, there are four primary stages of development. The first, the sensorimotor stage of thinking, occurs from birth to two years of age. The second is the Preoperational stage occurring from two to seven years of age characterized by continued highly egocentric thought processes and behavior. The Concrete Operational stage occurs from 7 to 11 years of age in which children learn most readily through object manipulation and social engagement. The final stage of development is known as formal operational and occurs from 11 years of age to adulthood. Decision-making is greatly enhanced at this stage because individuals are able to participate in abstract reasoning by recognizing numerous possibilities or outcomes and participating in hypothetical thinking (Miazga, 2000).

Piaget’s developmental theories regarding cognition have been applied to the socialization of individuals although not specifically to behavior. To participate in moral development, individuals must have acquired the cognitive ability to reason in a logical manner and appreciate the social perspective of others. Therefore, the development of morality has most often occurred later in life during the periods of adolescence and
adulthood as the prerequisite cognitive skills have emerged. Without the development of moral judgment, individuals have appeared less receptive to the redirection of others making the school environment an extremely challenging situation. “Unless handled positively, discipline of any kind may be perceived by the child as punishment…children three to eight years of age are still just beginning to learn the advanced skills of seeing things from another person’s perspective” (Gartrell, 1987, p. 55). The ability to appreciate how one’s behavior may impact the feelings and behavior of another could be much more important than the knowledge of what behavior is appropriate versus inappropriate (Schickedanz, 1994).

Vgotsky’s Social Theory of Cognitive Development has also played a critical role in the compilation of developmental theory literature. His theory differs from those of Gesell and Piaget in that he set forth a notion that cognitive development may be perpetuated through direct instruction models via interaction with other societal components or beings. He claimed that individuals have a “zone of proximal development” defined by the distance between the individual’s current level of thinking and the required or desired level of thinking (Miazga, 2000). The acquisition of higher order thinking most aptly occurs through social relationships with others and participation in the processes of society. The process of direct instruction has most often occurred within the context of family systems. It has been within this modality of social participation that self-regulation occurs (Wambach, Brothen, & Dikel, 2000).

Kohlberg’s Theory of Moral Development has been closely aligned with Piagetian theory. According to Kohlberg, particular themes provide the basis for the decision-making process at six specific levels. Level 1 is guided by the avoidance of
punishment. Egocentricity, or the determination of what is to be gained by the individual, has become the trademark of Level 2. Level 3 has been depicted as the stage in which the individual focuses on being a good person. The existence of rules and laws, which require obedience, has determined morality at level 4. Universal laws and what is good for the majority have guided level 5 thinking. At level 6, decisions have been primarily based upon the existence of a fully developed conscience (Miazga, 2000).

Erikson has proposed the existence of eight psychosocial life stages. The basis of each stage and a component necessary for achievement has been successful interactions with others. “Successful resolution of each stage leads progressively to hope and trust, autonomy, initiative and purpose, industry and competence, identity, intimacy, care, and wisdom and integrity” (Miazga, 2000). Erikson maintained that, as reflected in his stages of development, emotional maturity continues to be sought as individuals move into adulthood. Although development follows similar paths, the rate of development among individuals is always consistent; therefore self-regulation may appear delayed in some individuals (Wambach et al., 2000).

Kroll and Black (1993) state that knowledge of the manner in which cognitive and social traits effect behavior and motivation for achievement in schools according to development theory has proven somewhat useful to educators. Basic developmental principles shared by all of the developmental theorists identified may be readily applied to the classroom setting. First of all, constructivism has incorporated active involvement in learning so that students may more readily construct meaning from the materials available. In other words, imitation and rote memorization have not perpetuated the learning process. Secondly, the construction of childhood knowledge has typically been
based on social interaction versus isolated engagement. Third, the differentiation and integration of areas of knowledge must have been arranged into some hierarchical structure allowing for varying rates of understanding among individuals. Finally, learning has historically been interrelated in nature; therefore the components of the curriculum must be properly sequenced and related in order to bring about global understanding. The aforementioned information provides a basic understanding of varying intellectual and social perspectives of the developing child that may be applied to instructional methods. However, although closely related, classroom management as it refers to the control of behavior, has not been directly addressed. “Some of our program participants struggle with the problem of integrating a developmental approach to teaching with the need to control students’ behavior from the time they enter the program until well into their first years of teaching” (Kroll & Black, pp. 437-38). Likewise, although developmental theory provides guidelines for optimal learning on the part of students, it has not ensured engagement in learning activities and therefore academic achievement among students. “It is important to differentiate between simply good behavior and active involvement, since the quality of the students’ involvement is likely to be related to the nature of the teacher’s program as well as the quality of learning” (Kroll & Black, p. 438).

Teacher Characteristics

Teachers and Student Behavior

Some research has been conducted regarding teacher attitudes and characteristics as they relate to the presenting behaviors of students. However, the impact of student behaviors and the management strategies utilized to address them has infrequently been
linked to the increase or decrease of the use of disciplinary actions. Likewise, student behavior and teacher management strategies have infrequently been linked to student achievement.

One study sought to investigate the relationship between identified personality traits or characteristics of teachers and the behaviors of his or her students. Three hundred children from ages 7 to 14 enrolled in public elementary schools participated in the study and were rated on classroom behaviors according to a five-point scale. The Edwards Personal Preference Scale (EPPS) was used to evaluate teacher characteristics. “High affiliation, abasement, and nurturance” needs were highly associated with negative or undesirable classroom behavior. The study was limited in that the results were only correlational therefore it could not be concluded that students’ classroom behaviors were a direct result of teacher characteristics” (Hartlage & Schlagel, 1974).

Many educators have stated that students with disabilities would be best served in the general education setting regardless of the presenting characteristics of its teachers. In a study designed to ascertain teacher tolerance of inappropriate student behavior, 74 regular education teachers and 28 special education teachers completed the Disturbing Behavior Checklist (DBC) modified by Mullen and Wood (1986) to rate tolerance levels of specific classroom behaviors. According to self-report, regular education teachers were much less likely to tolerate students who were “irritable, easily aroused to anger,” impertinent, saucy,” “inattentive to what others say,” or “attention seeking, shows off” than special educators. Both regular and special education teachers agreed that behaviors that should be severely limited included “profane,” “swears,” “curses,” “masturbates,” “fights,” “destructive,” and “disruptive” (Landon & Mesinger, 1989, p. 245).
Lack of tolerance on the part of regular education teachers versus special education teachers regarding rather minor inappropriate behavior has provided evidence that possibly regular education teachers have been ineffectively prepared in the area of behavior management in their preservice preparation programs and they have not felt adequately assisted regarding difficult students upon entering the classroom.

The lack of difference between responses to questions about placement with or without assistance may indicate teachers are skeptical about the efficacy of assistance in instructional preparation for students with behavioral disorders. Otherwise, it seems likely that the number of acceptable behaviorally disordered placements would have increased with postulated assistance more than it did. (Landon & Mesinger, 1989, p. 246)

Effective teaching behaviors on the part of regular educators while instructing students with mild disabilities in the mainstream setting have been identified. The behaviors included:

(a) giving positive feedback, (b) giving sustained feedback, (c) responding supportively to students in general, (d) responding supportively to low-ability students, (e) responding supportively to learning problem behavior, (f) asking questions that students answer correctly, (g) presenting learning tasks for which students have a high success rate, (h) using time efficiently, (i) intervening in misbehavior at a low rate, (j) maintaining a low rate of punitive interventions, (k) being punitive at a low rate, (l) using criticism at a low rate, (m) keeping the need for discipline low, (n) using little time for student transitions, and (o) keeping off-task time low. (Kauffman & Wong, 1991, p. 227)

Given the relative essential nature of these skills, perhaps teacher training programs may have more readily incorporated them into preparation activities.

Walker and his colleagues (Hersh & Walker, 1983; Kauffman, Lloyd, & McGee, 1989; Walker, 1983, 1986; Walker & Lamon, 1987; Walker & Rankin, 1983) found through several studies that special and regular education teachers deemed behaviors reflecting independence and attention to the task at hand as necessary and critical to achievement and those behaviors which are threatening to their authority or control over
the classroom as unacceptable. Both special and regular educators were reportedly unconcerned with developing relationships among students. Special education teachers seemed to have greater tolerance and decreased expectations of all students as opposed to their regular education counterparts (Kauffman & Wong, 1991). Despite expectations or levels of tolerance, characteristics of effective teachers included “high demands for students academic performance and conduct, careful design of activities to maintain high rates of on-task behavior, frequent praise for appropriate behavior, little use of criticism or punishment, and self-confidence in helping students learn and behave appropriately” (Kauffman & Wong, 1991, p. 232). Again, though general qualities or characteristics of effective teachers were noted, specific strategies for maintaining appropriate classroom behavior, which brought about independence and attention to task among students, were not outlined in this body of research.

**Teacher Attitudes and Student Behavior**

Teacher attitudes and their impact on the educational setting have been documented in relation to teacher turnover, discrepancy between the performance of boys and girls in the classroom environment, and student behavior and academic achievement. However, specific teacher behaviors regarding student management that bring about positive behavior and performance in school have rarely been addressed. In a study conducted by Boe, Bobbitt, and Cook (1997) the retention, reassignment, migration, and attrition rates of special and general education teachers were analyzed. The study found that special education teachers tended to be more transient than general educators regarding teacher turnover defined as “all changes in teacher status from one year to the next, with attrition being one of its components” (Boe et al., 1997, p. 380). According to
the study, 19,500 special education teachers and 122,800 general education teachers nationally left the field in the 1987-88 school year calling into question how those numbers may be reduced. The authors suggested that school officials might have invested more greatly in retaining experienced teachers through increased training and opportunities.

Shapiro and Dank (1980) explored teacher attitudes and how they diversely impact the performance of boys and girls. Past literature has revealed discrepancies in the academic performance of boys and girls regarding reading readiness and achievement. Various studies have attributed those differences to environmental conditions such as the disproportionate number of female teachers in the United States, maturational issues, and genetic predisposition in regard to gender. Still other findings have suggested that teacher attitudes have played a large role in student achievement. For example, research has indicated differing expectations among male and female teachers with female teachers judging girls as more ideal students. Students themselves have validated these findings in other studies by expressing perceived discrepancies in treatment of the sexes with more negative behavior directed toward boys. The resistance of boys to the expectations of female teachers was called into question and indirectly investigated in the study. The findings were as follows: (a) there was a nine to one ratio of female to male teachers in the elementary schools investigated, (b) there were significant differences among the number of male elementary teachers employed throughout various geographical regions in the United States, (c) the majority of male teachers have been employed in grades four through six (Shapiro & Dank, 1980).
Finally, teacher attitudes have been investigated as they relate to student behavior and academic achievement. The initial assumption of a study conducted by Rose and Medway (2001) was that teacher attitudes regarding student outcomes guided the behavior of the teacher toward students and in turn student behavior. On-task behaviors on the part of students in a limited number of studies in the past have been linked to student achievement. Effective teaching behaviors that perpetuated this condition have been identified as “structuring activities, maintaining a controlled classroom environment, and following responses to questions with immediate and corrective feedback” (Rose & Medway, 2001, p. 376). The sample in the study included 44 female fourth grade teachers from a suburban middle to upper class community. Results of the study indicated that fewer verbal controls exhibited by the teacher produced higher achievement among students. Secondly, the more often students were actively participating in the assigned task, the greater was their achievement. Finally, the instructional style of the teacher was responsible for one-third of the variance in student behavior with a “circulatory” style proving to be most effective in the production of on-task behavior. For example, teachers who moved from one student’s desk to another to answer questions were more effective than those who remained in a stationary area waiting for students to move toward the teacher. Although teacher attitudes and beliefs were effectively related to on task behavior, the study was limited in that it did not address specific management techniques in relation to presenting student behaviors that were proactive in nature.

A final study analyzed teacher behavior toward higher versus lower achieving students although it did not address specific management techniques that elicited
appropriate or on-task behavior. Twelve third grade teachers and their students participated in the study. Six higher achieving and six lower achieving students were selected from each class with equal numbers of boys and girls. Correct responses receiving no feedback and contacts reflecting brief interaction produced negative results regarding behavior. Higher achieving students were given more opportunities for responses whereas lower achieving students received more criticism. Teachers who demonstrated greater regard for higher achieving students achieved the highest ratings on effective instructional behaviors such as clarity of instructions and percent of time engaged in academic instruction. Teachers who demonstrated greater concern for lower achieving students were deemed less effective. Again, the study was limited as it only addressed general classroom management techniques rather than specific behavior management techniques on the part of the teacher in order to bring about on-task behavior.

Research regarding teacher and student matching has led researchers to identify characteristics of effective teachers and environments in student behavior and academic achievement. According to one study, effective teachers “make efficient use of time, seldom have to use a special intervention, seldom use punishment, demonstrate little need for discipline, do not spend much time making transitions, give frequent positive feedback, give sustained feedback, avoid criticism of student responses, assign tasks of appropriate difficulty, use supportive interventions, respond supportively to low ability students, and respond supportively when a student has a learning problem” (Wong, Kauffman, & Lloyd, 1991, p. 109). Likewise, students have been identified as responding with little off task behavior and high rates of correct responses to academic
tasks. Although supportive interventions were described as effective in dealing with student behavior and producing positive achievement outcomes, little research has been conducted regarding the utilization of specific, supportive techniques and changes in teacher behavior which have led to reduced disciplinary action.

Cotterell (1982) provided an overview of studies that addressed teacher-student matching and its impact on behavioral and educational performance. Thirty-five studies were analyzed and grouped according to categories such as cognitive achievement, behavior, and affective measures. Multiple studies found that low ability students were more successful in highly structured settings rather than less structured ones where high ability students experienced greater achievement (Viney & Clarke, 1978; Watts, 1975). Likewise, research has indicated that students more dependent in nature have performed better academically in environments with great affective and academic support whereas more assertive individuals have experienced greater success in less supportive settings (Elsworth, 1979; Power & Cotterell, 1979). Cotterell concluded that matching was most effective in impacting the affective or behavior outcomes of students. Although the research on teacher student matching was effective in providing an ideology of an appropriate classroom environment dependent on student characteristics, it was not useful in describing and analyzing the effectiveness of various supportive and individualized behavior management techniques.

Teachers and Inclusion

Researchers have defined successful inclusion practices as “the meaningful participation of students with disabilities in social and academic activities within the general education classroom” (Soodak, Podell, & Lehman, 1998, p. 482). When teachers
support inclusion, student participation and achievement are positively impacted.

Traditionally, teachers have displayed more positive attitudes toward students who exhibit physical disabilities as opposed to those that possess academic or behavioral difficulties. In a study conducted by Soodak et al., (1998), 188 participants completed 4 surveys addressing responses to the inclusion of students with various disabilities, feelings regarding teacher and personal efficacy, actual teaching practices, and conditions of the school climate. The study found that experienced teachers were more negative regarding the inclusion of students identified as intellectually disabled or behavior disordered; however, acceptance increased greatly when teachers experienced high rates of teaching efficacy as well as utilized differentiated instructional approaches.

Experienced teachers, despite instructional techniques utilized, were much more hostile than inexperienced teachers regarding students identified as intellectually disabled or behavior disordered. Specifically, all survey respondents were much more receptive to the inclusion of students with hearing impairments or other physical impairments rather than those with intellectual disabilities, learning disabilities, or behavior disorders.

Teachers who experienced high levels of personal efficacy were much less anxious regarding the inclusion of students with disabilities (Soodak et al., 1998).

Other research has indicated a lack of confidence among general educators regarding the management of students who exhibit learning or behavioral attributes that disrupt the classroom environment. According to a report by the U.S. Department of Education in 1999, almost 80% of students receiving special education services spent the majority of the instructional day in the general education settings. As a result, many general education teachers have requested greater support and continuous training.
regarding serving students with disabilities (Katsiyannis, Ellenburg, & Acton, 2000). Many general educators have continued to utilize large group instructional techniques rather than more individualized approaches to teaching, blaming their apparent inflexibility on a lack of training and support from other school personnel (Katsiyannis et al., 2000). Negative attitudes have resulted in decreased use of effective practice leading to deflated levels of student achievement. Effective behavior management techniques such as specific praise, ignoring, criterion-specific rewards, group contingencies, peer-mediated strategies, self-management, over correction, and exclusion must be linked to the problem behavior and deemed the least intrusive method of coping in order to bring about positive behavior changes; yet few teacher preparation programs have addressed this need (Katsiyannis et al., 2000).

Teacher Preparation Programs in Georgia

According to a recent study by Grizzard (2002), teacher personnel preparation programs in Georgia do not adequately prepare future educators in the areas of individual and group behavior management. The sample studied consisted of colleges or universities within 150 miles of Atlanta, GA. The institutions were selected based on three factors. First, they offered a course of study in the area of early childhood education. Second, the Commission on Colleges of the Southern Association of Colleges and Schools must have accredited the institution. Finally, the Professional Standards Commission must have approved the teacher preparation programs.

The variables included the total number of credit hours in the professional program, number of credit hours in which students were required to participate in courses which mentioned the term “classroom management” or specified students with special
needs, and the language used to describe the courses offered. The current undergraduate bulletins were used to gather the data.

The name of the college or university, year for which the bulletin was published, total number of hours in the professional program, course number, title, description, and number of hours were copied directly from the text and transposed into a table format (see Appendix A). Frequently used terms or phrases were identified and placed in a separate table (see Appendix B). All resulting data were color-coded to assist the reader in discriminating the information. The content was valid in that it was taken directly from the text published by the college or university itself. Likewise, the construct was valid as information was directly transposed from a narrative format to a more readily analyzable table.

The colleges and universities analyzed included Valdosta State University, University of Georgia, Brenau University, Mercer University, Georgia College and State University, Kennesaw State University, State University of West Georgia, and Piedmont College. In addition to previously identified qualifications, the National Council for Accreditation of Teacher Education (NCATE) has accredited the State University of West Georgia, Kennesaw State University, Georgia College and State University, University of Georgia, and Valdosta State University. The Southern Association of Colleges has accredited the University of Georgia as well.

Valdosta State University and the University of Georgia provided teachers with the most training in classroom management and addressing students with special needs reporting nine and seven hours respectively. All other institutions, with the exception of one, offered programs that provided one three-hour course discussing classroom
management and one three-hour course addressing students with special needs totaling six hours. Georgia College and State University was the only exception requiring five hours total in these two areas. Three hours focused on children with special needs and two hours focused upon managing the classroom.

Four of 20 courses specifically mentioned behavior management in course descriptions or syllabi resulting in 50% of the preparation programs providing any behavior management training to future teachers. Two of 20 courses mentioned student motivation. Only one course addressed learning styles, group dynamics, teacher-student relationships, leadership styles, peer group influences, or crisis control. One course descriptor identified teacher authority and appropriate punishment as a component of the course. Eight of 20 courses focused upon the arranged environment and principles of classroom management. Seven courses addressed characteristics of exceptionality. Five courses provided instruction regarding lesson/unit planning and instructional adaptations.

To summarize, Valdosta State University spent the greatest amount of time focusing on classroom management with 10% of the coursework oriented toward that topic. However, it should be noted that none of those course descriptions mentioned behavior management. Instead, terms included models of teaching, lesson/unit planning, arranged environment, and principles of classroom management. Approximately five percent of the professional program was directed toward students with special needs utilizing key phrases such as characteristics of exceptionality and home, school, and community.

The University of Georgia focused on classroom management seven percent of the time with no language pertaining to behavior management. Approximately five
percent of the professional program was directed toward students with special needs. Terms utilized in this course included arranged environment, history of early childhood special education, family-focused intervention, and methods for team teaching.

Brenau University used 4% of its professional program instructional time to focus on classroom management. Principles of classroom management, student motivation, and behavior management were the topics addressed in the three-hour course. The class that focused on students with special needs was directed toward such topics as characteristics of exceptionality, legal provisions for special education, pre-referral procedures, and instructional adaptations. Again, only four percent of the course work was directed toward students with special needs.

Mercer University dedicated approximately five percent of its professional program to the topic of classroom management. Lesson/unit planning and student assessment and evaluation were the primary topics addressed. The three-hour special education course constituted approximately five percent of the program covering two primary topics including characteristics of exceptionality and instructional adaptations.

Georgia College and State University focused on the topic of classroom management three percent of the time incorporating topics such as behavior, time, and resource management. The course in special education comprised five percent of the program and addressed characteristics of exceptionality as well as instructional adaptations.

Kennesaw State University focused on classroom management approximately four percent of the time. The three-hour course addressed models of teaching, the arranged environment, principles of classroom management, student motivation,
behavior, time, and resource management as well as learning styles. The special education course constituted four percent of the program and addressed only characteristics of exceptionality.

The State University of West Georgia focused on classroom management for approximately four percent of the time. Topics addressed included lesson/unit planning, arranged environment, principles of classroom management, and resource management. The three-hour special education course included only two topics, characteristics of exceptionality and instructional adaptations, also making up four percent of the program.

Piedmont College focused on classroom management approximately four percent of the time addressing topics like parent-teacher relationships, instructional adaptations, behavior management, group dynamics, teacher-student relationships, leadership styles, peer group influences, crisis control, student rights, and teacher authority/appropriate punishment. The special education course addressed characteristics of exceptionality as well as the home, school, community also comprising approximately four percent of the professional program.

In conclusion, Valdosta State University spent the greatest amount of time on the topics of classroom management and students with special needs with 15% of the professional program hours dedicated to this purpose. The University of Georgia spent the second greatest amount of time on these topics utilizing over 12% of professional program time teaching skills in classroom management and focusing on students with special needs. Kennesaw State University and the State University of West Georgia spent the least amount of time on these topics. Only seven percent of the total professional program time was spent training teachers in these domains. Mercer
University and Piedmont College allocated nine percent respectively to training teachers in classroom management and working with students with special needs. Brenau University and Georgia College and State University were comparable spending approximately eight percent respectively of their time focusing upon classroom management and students with special needs.

These results indicate that professional preparation programs in the state of Georgia have not addressed the previously mentioned issues. First, a maximum of six hours in course work in any program focused on classroom management issues. Each of the programs only spent between three percent and five percent of the time involved in courses of study addressing the instruction of students with special needs. This relatively small amount of training does not adequately prepare teachers to instruct students behaviorally or academically at risk or to face the challenges of students receiving special education services, as they are included in the mainstream environment due to the emphasis on inclusion in regular classrooms. Second, if classroom management is a significant factor of student achievement it seems as though more than four percent to five percent of course study should focus on this topic. Finally, the information obtained strongly supports the notion that higher education programs spend a significant amount of time supplying teachers with a knowledge base but few academic and behavioral tools to apply it to students in the classroom.

Although Valdosta State University spent 15% of the time focusing on classroom management and students with special needs, 85% of the courses were geared toward providing teachers with basic knowledge pertaining to subject matter such as math, science, language, and social studies as well as music and art appreciation courses. All
other colleges and universities analyzed spent 90% to 92% of the professional program providing future teachers with a knowledge base. The University of Georgia was the exception focusing approximately 88% of their college preparatory program on knowledge versus behavioral and academic management techniques.

The Georgia Professional Standards Commission required that an individual receiving a degree in the field of Early Childhood Education must complete three semester hours in each of the following areas: 1) human growth and development, 2) general curriculum/methods for early childhood education or a college-supervised practicum/internship, 3) communication arts for the young child, 4) socio-behavioral sciences for the young child, 5) creative arts for the young child, 6) science for the young child, 7) mathematics for the young child, and 8) health and physical education for the young child. While knowledge is necessary, education is not required in the area of behavior management and classroom application.

Student Characteristics

Students and Beliefs Regarding School and Achievement

Discrepancies in achievement among boys and girls have been related to varying beliefs between the sexes. In a study conducted by Licht, Stader, and Swenson (2001), 192 fifth grade students in a middle to upper class area of a northeastern city completed questionnaires incorporating a self-evaluation of academic performance, rationale for performance, and their own perceptions of feedback received by the teacher. Grades in the areas of math, reading, social studies, and science were then analyzed and students were divided into high and low achieving groups. There were no sex differences in expectations for report card grades or actual student performance. However, high
achieving students were more likely to attribute academic success versus failure to their own ability. Based upon past research, girls have proven to be less confident regarding their academic ability when given unclear or infrequent feedback by teachers. Despite that fact, the study indicated that boys, according to self-report, received much more frequent feedback than girls. In general, both male and female participants in the study displayed greater vulnerability in the areas of social studies and science versus math and reading, topical areas more concrete in nature.

A study conducted by Davies and Bremer (2001) in the United Kingdom analyzed the differences in attitude regarding school life and the curriculum among children in their second year of primary school (approximately seven years old) and then again in their fourth year of primary school (approximately 11-years-old). Three-hundred and eighty-eight boys participated in the study along with 364 girls. The most significant differences in the study were related to attitude. Boys reported much greater negative attitudes toward discipline and relationships with teachers. Girls were more willing to use the teacher as a resource for learning and viewed him or her as an authority figure to be respected. In contrast, boys reported being less concerned about “breaking school rules, being told off, individually or collectively in public by the teacher and head teacher, and getting into arguments and fights” (Davies & Bremer, 2001, p. 110). Research has provided evidence for the fact that perhaps the achievement of boys in school is not as directly related to beliefs about their own abilities as to the management structure within the school and its response to behavioral issues.
Sex and Cognitive Ability

A research study by Patterson, Kupersmidt, and Vaden (1990) focused on three different dimensions of ability including peer relations, behavior or conduct, and academic achievement as success or lack thereof in those areas that had been linked previously to school dropout, delinquency, and psychopathology in later years. According to research findings, boys exhibited a greater incidence of behavior problems during childhood, have greater difficulty regarding peer relations during the childhood years, and demonstrated greater setbacks as a result of economic suffering or being reared by a single parent. Subjects in the study included 868 children in the second through fourth grades. Teachers rated students utilizing the Classroom Adjustment Rating Scale (CARS) with subscales that addressed acting out behaviors as well as shyness and anxiety. Boys from low-income backgrounds and from single-parent families as well as black children were reportedly experiencing greater difficulty at school regarding behavior. Likewise, peers reported liking boys and children from low-income backgrounds less than other student groups. Boys, black students, low-income students, and those from single-parent families scored lower on achievement tests than their counterparts. Sex was the strongest predictor regarding a student’s level of competency in the area of conduct whereas level of income was the strongest regarding competence in the areas of achievement and relationships with peers. Overall, income level and sex were the most effective predictors of a student’s overall level of competency at school. Sex was most significant in predicting competency in the area of conduct but was also significant regarding academic achievement and peer relationships.
Various studies have concluded that IQ scores among boys and girls do not differ significantly. Therefore past differences in achievement may have been related to sex differences in specific areas of ability rather than overall competency. For example, in a report provided by the Education Commission of the States (1981) it was reported that females had achieved higher reading achievement than males at ages 9, 13, and 17. On the other hand, the scores of males and females in the area of mathematics hardly differed at ages 9 and 13 but males had a distinct advantage at the age of 17. Sex differences which favor girls regarding verbal ability and boys regarding mathematical ability have attempted to be explained in a variety of ways including hereditary differences linked to x-chromosomes, discrepancies due to the presence of varying levels of hormones in males and females, and differences in cerebral organization of the brain as well as brain lateralization.

Levine and Ornstein (1983) reported that, despite such explanations, boys have been placed at a disadvantage due to great emphasis on verbal ability in the elementary school years and requirements to use fine motor versus gross motor skills as well as to sit attentively for long periods of time. Secondly, higher rates of distractibility among boys have made it more difficult for this population to attain reading and writing skills. Finally, a natural tendency toward male aggressiveness has lended itself to increased behavior problems and poor performance in the schools. Although no concrete data have been gathered, due to findings such as these it has been speculated that it has perhaps not been IQ that has interfered with success in school on the part of boys but discrepancies on the part of males and females in reference to specific areas of ability and behavior.

(Levine & Ornstein, 1983)
Rather than clusters of cognitive abilities or behavioral discrepancies, some researchers have concluded that the environment may be responsible for differences among the apparent cognitive ability of males and females. Forty-eight three and five-year-olds enrolled in a childcare program run by a university participated in a study designed to analyze the relationship between sex-role orientation and cognitive functioning. The study yielded two primary findings. First of all, males tended to select masculine toys for play whereas females chose ones more feminine in nature. Secondly, as scores in the area of vocabulary increased, scores in the area of classification decreased. Also of significance were findings that the mean score of three-year-old males on the Peabody Picture Vocabulary Test (PPVT) was 110 whereas it was 121 for five-year-old males. The results were surprising, as the measure has been created to account for age differences. Possible explanations included questionable validity regarding the instrument when utilized with younger children as well as differences in the attention spans of the two age groups (Mullis & Bornhoeft, 2001).

**Sex and Student Achievement**

Various studies have reported higher levels of student achievement for girls as opposed to boys in the areas of language arts and spelling as well as affective development. Numerous factors have been attributed to this discrepancy in achievement based upon the differing characteristics of boys and girls. In a study conducted by Yarborough and Johnson (1980), 52 seventh grade girls and 42 seventh grade boys were compared according to age, socioeconomic status, readiness testing, and IQ scores in
order to ascertain cognitive development, perceptions of themselves and the school
environment, and the impact of affective development on intelligence levels or in-school
performance. Results indicated few differences among males and females regarding
cognition, IQ, relational thinking, reading comprehension, and vocabulary. However,
girls did score significantly higher than boys in the areas of language arts, spelling, and
certain affective variables including: 1) total adjustment, 2) dependency, 3) identification
with friends, 4) and attitudes toward school, reading/language arts, classmates, and
teachers. The study has brought into question whether or not increased skills in the areas
of written language and affective development among girls has led to the popular belief
that girls are better readers as well.

Other studies have also questioned the impact of differentiated processing among
boys and girls as well as the affective development of these individuals as it has related to
school achievement. In an investigation conducted by Thompson (2001), three related
studies were designed to explore comparative reading abilities of boys and girls. In the
first, five to seven-year-old children were asked to read two varying yet related sets of
pseudohomophones. Girls demonstrated a greater positive difference from sets A to B
demonstrating greater reliance on direct processing versus phonological segments.
Thompson (2001) also designed a second study directed toward the reading of words
with familiar grapheme-phoneme relationships versus exceptions. It again appeared as
though boys had relied to a greater extent on phonological segments as they demonstrated
poorer performance on words that were exceptions, the difference being greater for boys
than for girls.
The third study by Thompson (2001) considered the phonological processing of familiar words, which were subject to flexibility regarding pronunciation. Combined results from all three studies indicated that the greater the phonological consistency of the word, the more apt boys were to be successful in reading it. The research supported the notion that boys who functioned at the same reading level as their female counterparts relied much more heavily on phonological processing in order to read the material provided calling into question the validity of achievement testing instruments which evaluate overall reading rates and levels. It was suggested that reliance on phonological segments to read the written word in all three studies may be representative of a gender specific “analytical” style of learning in which boys more competently process and understand the parts versus the whole of an assigned task making early learning much more challenging.

Further research studies have concurred with the academic and affective findings set forth by previous authors. Around the ages of six and seven, children have begun to exhibit behaviors that are reflective of heterogeneous groupings. Traditionally, it has also been at this time that students enter into the realm of formal education. Boys have been shown to display higher rates of physical aggression than their female counterparts due to aggression displayed by girls having been viewed as more indirect and verbal often resulting in the isolation of peers or purposeful defamation of character. In a study conducted by Kowaleski-Jones and Duncan (1999), children aged 6 to 13 were measured according to achievement utilizing the Peabody Individual Achievement Test (PIAT) and behavior utilizing the Edlebrock Behavior Problems Inventory (BPI). Results indicated that girls achieved at a significantly higher levels than boys. The authors found these
results consistent with previous research that suggested that girls value the achievement of an activity to a greater extent than boys. Likewise, girls have proven to be more dependent on task achievement to evaluate their own potential whereas boys have placed little value on such measures. The lack of concern toward task completion and achievement may be a primary reason for greater incidences of perceived defiance toward authority on the part of boys rather than girls. Due to the subjective nature in which girls analyze experiences, they were also proven to be much less resilient to sudden changes in behavior patterns than their male counterparts (Kowaleski-Jones & Duncan, 1999).

In an extensive synthesis of the literature regarding gender and achievement, Salisbury, Rees, and Gorard (1999) sought to outline the variables which have accounted for discrepancies in performance among males and females in relation to school achievement. First, the curriculums of public schools have often favored females regarding learning styles as girls have repeatedly performed much better than boys regarding language skills throughout ages 5 to 16. Girls have traditionally tended to read a wider range of books including fictional texts whereas boys have preferred to remain engaged in non-fictional material more technical in nature. Writing has proven to be a reflection of what has been read resulting in more extensive and reflective compositions on the part of girls and more fragmented, factual content on the part of boys providing girls with a distinct advantage in content areas such as language arts and others global in nature.

In addition to variations in reading interests and writing skills, boys have been shown to be much less adequately prepared regarding behavioral development on entering the school environment. For example, boys have been shown through various
studies to prefer more active learning opportunities and are more frequently bored than their female counterparts. Likewise, boys have exhibited a decreased ability to maintain concentration and to possess less effective organizational skills. To address these deficits, research has shown that teachers more often engage in verbal interactions with boys as a means of preventing misbehavior on the part of more talkative male students. (Salisbury et al., 1999)

In addition to learning interests and behavioral competencies, response formats on standardized assessments have proven ineffective in meeting the needs of boys. Boys have traditionally proven to be more successful on those assessments that require brief responses whereas girls tend to be successful on those that require more extensive ones. Highly structured responses requiring short answers have proven limiting to girls who often reflect upon excess information and use it to build meaning. On the other hand, boys have typically performed more poorly without the extensive structure provided by short answer responses. The author has cautioned that the explanations set forth regarding discrepancies in the academic achievement of boys and girls is not necessarily adequate as much of the findings have been based on small-scale studies with little consistent backing from other bodies of research. However, some evidence for the hypotheses set forth has been gathered. (Salisbury et al., 1999)

In summary, reported discrepancies between the academic achievement of boys as compared to girls in the school environment are a reflection of processing and behavioral differences rather than a function of cognitive ability. First, the processing skills of boys as compared to girls in the area of reading are more dependent on consistent spellings and rules as well as an ability to break the word apart. Likewise, boys perform more
adequately on assessments which require short responses whereas girls tend to provide much more adequate extended responses. Regarding behavior, boys tend to exhibit more overt aggressive behaviors when discontent and lack the dependency upon task achievement to determine their own level of potential. They demonstrate a decreased ability to attend to the task as well as less advanced organizational skills when compared to their female counterparts. Further studies are necessary to determine the impact of processing and behavioral discrepancies on the inconsistent performances of boys and girls in the school environment.

Referrals in Public Education

Frequently Reported Behaviors, Precipitating Factors, and Administrative Action

Researchers analyzed student disciplinary data in two elementary schools consisting of 450 and 650 students respectively. Student populations varied with 26% of the population being white at the first school and 62% white at the second. Student turnover rates were 31% and 10% respectively. Student discipline referral information was keyed into a database making available demographic information as well as documentation of incidences resulting in office referrals. Referral rates between the two buildings were dramatically different. Recidivism rates of repeated referrals were also high calculated at 80% during the 1992-1993 school year at the initial school and 77% in the 1993-1994 school year. These results were nearly replicated at the second school studied with rates of 77% in the 1991-1992 school year and 72% in the 1993-1994. There was a lack of consistency between referrals regarding the behaviors for which students were referred from school to school. Also, recidivism rates indicated that students who have received one referral were very likely to receive another within the
same school year revealing consistent referral patterns among teachers or chronically disruptive behavior among students which may be a reflection of the student’s desire to escape the learning environment. Therefore, office referrals may have actually reinforced student behavior (Wright & Dusek, 1998).

Numerous studies have reported behaviors regarding insubordination and noncompliance as the primary reasons for discipline referrals in middle schools providing evidence that defiance toward authority has traditionally been the least tolerated form of student misbehavior (Skiba & Peterson, 1997). In the initial phase of one study of a middle school population in a large, midwestern public school district, referral data were examined to provide demographic information regarding students referred to administrative offices due to discipline concerns. Data were gathered according to standardized reporting forms that reflected the nature of the incident and the action taken as a result. Referral information also included the date and time of the offense, by whom the referral was made, previous action taken in reference to the student, the date that administrative action took place, and whether or not parents or guardians had been contacted regarding the offense. A total of 11,001 students were included in the database with 4,521 having had disciplinary contact representing approximately 41% of the population. Those students who had disciplinary contact had received a total of 17,045 office referrals resulting in a mean of 3.77 referrals per year per student. Disobedience, conduct, disrespect, and fighting were, from greatest to least, the most frequent reasons for referral. African-Americans were more likely than other ethnicities to receive referrals. Those participating in free or reduced lunch programs were more likely than those paying full price to receive a referral. Students labeled emotionally handicapped
were more likely to receive referrals than students identified as having any other disability. Boys were more likely than girls to receive referrals. In-school and out-of-school suspensions were the most frequently implemented consequence regarding behavior violations.

In the second phase of the study, the data from another lesser-sized midwestern public school district were analyzed according to the distribution of office referrals. Student characteristics were determined according to 1993-1994 data. In that year, of the 988 office referrals made, male students received 75.4%. Students from low SES backgrounds or who were disabled were frequently referred as well. The most frequent administrative action taken was to send a report home to parents or guardians. The data regarding one school during the 1995-1996 school year were also reviewed. Six-hundred and ten students were served in the school building at that time and 846 office referrals were made throughout the year. The most common reasons for referral included “lack of cooperation” and “insubordination/verbal abuses” followed by “excessive tardiness/absences,” and “inappropriate/profane/abusive language.” Due to the disproportionate number of students referred for offenses relating to defiance of authority, it would seem that middle schools would develop more proactive strategies in coping with this behavior, often considered to be a developmental milestone of adolescence. Likewise, consideration should be given to the fact that African-Americans, students from low SES backgrounds, boys, and those labeled emotionally disturbed were more often referred than their counterparts.
Effective Alternatives to Punishment

Many researchers have identified suspension as an unacceptable means of punishment in regard to student discipline as it has been associated directly with increased rates of eventual school dropout. The research indicates that those separated from the school environment beginning in the middle school years have been shown to spend increasing amounts of time with individuals considered to be antisocial in nature while not in school. Disciplinary procedures, which have further displaced students from the school environment, have been deemed counterproductive in producing positive behavioral outcomes and therefore increased levels of student achievement. Instead, alternatives which have been identified as more effective in nature include crisis intervention, conflict resolution, peer mediation, school-based problem-solving teams, building-wide behavior management plans, and instructional techniques which teach appropriate behavior versus punishing behavior inappropriate in nature (Skiba & Peterson, 1997).

Utilization of Office Referrals to Improve Student Behavior

A number of uses of discipline referral data have been proposed to improve student behavior on a school-wide basis. First, office referral data may be used to possibly predict students’ school failure, delinquency, future chances of referral to special education or placement in an alternative setting, or future incidences of school violence. Second, the data may be used to identify referral patterns among staff members citing areas in which teachers may require further information or training. Third, referrals may be used to identify current practices or techniques that are ineffective in producing positive outcomes such as standard disciplinary procedures among a team of teachers or a
particular grade level. Fourth, referrals may reveal behavior patterns on the part of a particular group of students, which is in need of intervention or social skills training such as verbal abuse toward teachers among boys. Fifth, discipline referral data may allow for the monitoring of individualized student behavior resulting in targeted interventions for that individual. Finally, discipline referral data may provide evidence of unintentional reinforcement of maladaptive behaviors provided by current discipline policies revealing strategies for adjustment (Tobin, Sugai, & Colvin, 2000).

Other researchers have proposed that office referrals be used as a means of early alert regarding emerging patterns of behavior on the part of teachers and students. Some have cited office referrals as evidence of increasingly difficult teacher-student interactions as well as chronic difficulty on the part of the teacher in dealing with specific behaviors requiring consultation by another staff member such as the school psychologist (Wright & Dusek, 1998). Researchers and educators have proposed that office discipline referrals be used in order to produce tiered systems of school-wide management which include various levels of intervention including universal, selected, and targeted as proposed by the U.S. Secretary of Education in 1998 in the document entitled Early Warning, Timely Response: A Guide to Safe Schools. The document focused on preventative measures to school violence in which administrators used discipline office referrals to reveal necessary areas of improvement thereby creating a system of support and intervention techniques to alleviate incidences of violence (Sugai, Sprague, Horner, & Walker, 2000).
Effects of Teacher Self-Efficacy on Special Education Referrals

A study was conducted to test the notion that a teacher’s sense of personal self-efficacy, may be a reliable predictor of teachers’ ratings regarding the problematic behavior of students. Two pilot studies were conducted in Dutch primary schools. The initial study assisted the researchers in developing and ascertaining the feasibility and usage of prereferral case materials and related instruments. In the second study, revised materials were tested and checked for variability.

Two-hundred and forty-one second-grade teachers from Dutch primary schools agreed to participate in the final study with completed data being returned by 230 teachers. Case studies, including whether problems were related to behavior or learning, student gender, and social background, were provided for teacher analysis. Demographic information regarding related teaching experiences and measures of self-efficacy assessed according to the Dutch Teacher Self-Efficacy scales were gathered to describe teaching participants. Chances of referral were determined by asking participating teachers to review case descriptions and record a number from 0 to 100 indicating whether or not the student would pose a problem in the regular education setting. Teachers were asked to provide a similar rating regarding the likelihood of referring the student to special education services. The problem type, learning or behavior, was the single determining factor regarding problem and referral chance. Students with learning problems received higher ratings on problem and referral chances with students who exhibited learning and behavioral problems receiving the highest ratings of all. Higher scores on self-efficacy scales were directly correlated to lower problem and referral chances (Meijer & Foster, 1988).
Sex and Referrals in Public Education

Sex and SST Referrals

In a study conducted by MacMillan and Lopez (1996), 150 children in grades two through four were compared regarding measures of cognition, achievement, and behavior to determine whether or not ethnicity and gender were factors in the referral process to Student Support Team (SST). Participants ranged in age from 7 to 12 years old and were 59.3% male and 40.6% female. The Wechsler Intelligence Scale for Children-III (WISC-III) was utilized in order to obtain data regarding IQ scores. Achievement scores were obtained using the Wide Range Achievement Test-Revised (WRAT-R). The Social Skills Rating System-Teacher (SSRS-T) was used in order to assess social skills and problem behaviors on the part of students as well as the Conners Teacher Rating Scale-28 (CTRS-28) and the Critical Events Index (CEI). IQ scores regarding ethnicity and gender were considered to be commensurate and not significant. The same was true regarding achievement data. However, males were rated by teachers as demonstrating more significant problems regarding behavior and social skills according to SSRS-T results. Males were also rated higher than females on all four scales of the CTRS-28 including conduct problems, hyperactivity, inattentiveness-passivity, and hyperactivity. Boys were also rated higher on the CEI that measured critical events according to the regular classroom education.

Teacher Standards and Special Education Referrals

In a study conducted by McIntyre (1990), the researcher attempted to investigate the relationship between varying responses elicited from teachers regarding high levels of student problem behavior versus lower levels. In addition, the author sought to determine
whether gender differences among teachers played a significant role in reporting according to the results of the Child Behavior Checklist (CBC). Participants included 52 teachers in grades one through three and 40 teachers in grades four through six. Three of the teachers involved were first-year instructors. Both the CBC and SBS Inventory of teacher Social and Behavioral Standards (SBS) were used to rate the frequency of behavior occurrences and teacher standards for behavior respectively.

Data revealed that teachers reporting strict standards made referral decisions that were different from those with more lax standards despite the inclusion of students with similar presenting behaviors in both environments. For example, students demonstrating aggressive behaviors were more often referred by teachers with low standards whereas teachers with strict standards referred more often students displaying low levels of aggressive behavior. The research study also indicated that although the students of the male teachers involved in the study exhibited greater frequency and intensity of aggressive behavior, male teachers continued to make fewer referrals than their female counterparts. This behavior was partially attributed to the ability of aggressive behavior to weaken the confidence of female teachers in managing the student resulting in referral to special education. Male teachers, on the other hand, have appeared to circumvent this outcome of aggressive behavior possibly due to greater physical strength or the underlying communication that they feel equipped to handle the behavior resulting in decreased student infractions (McIntyre, 1990).

Conclusion

According to statistical data, the majority of students enrolled in special education have been boys. Developmental theorists have related academic and social development
to the maturational process of all individuals concluding that one reaches developmental milestones at various rates often dependent upon genetic predisposition and environmental influences.

Other researchers have attributed the aforementioned fact to teacher characteristics and varying abilities to tolerate and cope with learning and behavior challenges on the part of students. Still others have related the disproportionate number of boys struggling in elementary classrooms to the varying attitudes of males and females toward school achievement, different processing methods on the part of girls and boys regarding cognition, or even methods of measuring achievement, which are contradictory to the affective development of boys. Again the maturational development of boys has been called into question. Due to greater challenges regarding social skill development, are boys truly capable of achieving at the same level as their female counterparts during the elementary school years?

Studies containing information regarding behaviors that have led to the acquisition of office referrals, predisposing factors, and administrative action have revealed the fact that a greater number of boys participate in this process on an annual basis across settings than do girls. Research has indicated that the result of participation in this disciplinary process has often led to punishments such as suspension and expulsion. Both of those consequences have been linked to increased school failure and drop out rates creating a bleak picture for the potential of academic achievement among disadvantaged groups. Alternatives to the previously mentioned consequences have been suggested, however school wide data regarding discipline office referrals has rarely been
utilized to recreate systems of behavior intervention in local buildings creating greater opportunities for behavioral and academic success for all students.

Research has validated the fact that boys were more often referred to student support teams for behavior related issues than their female counterparts. Teachers have reported concerns in the areas of conduct problems, hyperactivity, and inattentive-passive behavior. Aggressive behaviors more often displayed on the part of boys have often led to further referrals to special education as general educators have received little training in the implementation of effective and non-intrusive behavior management techniques.

Despite the disturbing nature of the disproportionate number of boys receiving disciplinary consequences, referrals to SST, and further to special education services, little research has been conducted regarding specific behavioral intervention techniques that may be readily applied in the general classroom setting. Effective behavior management on the part of the teacher has been identified as leading to increased on-task behavior resulting in greater opportunities for academic achievement. This study will assist the researcher in developing strategies for reducing office and SST referrals through proper behavior management techniques thereby positively impacting student achievement.

Therefore, significant variables were chosen as points of analysis for this study. First, the overall impact as well as its impact on teachers from high and low SES schools respectively was studied. Second, pre and post intervention data were analyzed according to communication style. Third, the study compared office and SST referrals prior to and following implementation of the intervention procedure in regard to third
versus fourth grade teachers. Finally, the number of office and SST referrals made for boys versus female girls were compared from pre to post intervention phases.

Definition of Terms

Several terms are used throughout the study. Definitions of these terms are as follows:

- **Behavior management** has been most often referred to as teacher-guided effective, individualistic analysis and modification of causation regarding observed behavior and its consequences. It has often incorporated specific techniques that teach self-control through increased awareness regarding cognitive processes and knowledge of how behavior can affect academic and behavioral occurrences (Swaggart, 1998). According to some researchers, critical components of effective behavior management programs have included the following: 1) collection of data on target behaviors, 2) identification of goals that are clear and specific, 3) consequences or “contingencies” that are clear and fair, 4) openness to students regarding operation of the system, 5) adjustment of components of the program as target behavior changes, and 6) management systems based on individual situations (Kerr & Nelson, 1989). Behavior management is identified as proactive management techniques that modify the behavior of individual students based upon teacher awareness of the antecedents of particular student behaviors and the consequences of specific actions taken by the teacher.

- **Classroom management** has been described as the general attitude or atmosphere that permeates the environment (Snyder, 1998). It has been referred to as the global management and direction of the group rather than a focus upon the individuality of each student and their characteristics. Basic principles of effective classroom management
have incorporated such ideas as clear and firm rules for all students and routines and
expectations which allow for purposeful and directed learning (McDaniel, 1994).
Therefore, classroom management is the general rules, guidelines, and standards that a
teacher has set forth for all students in the classroom environment.
CHAPTER III

METHODOLOGY

This chapter describes the following aspects of the study including: a) restatement of the purpose, b) statements of hypotheses, c) demographic information, d) research design, e) instrumentation, f) data collection design, g) level of significance, and h) statistical analyses.

Restatement of the Purpose

The purpose of the study was to determine if teacher knowledge and skills on behavior management could be increased in third and fourth grade classrooms in a metropolitan area using Project PEGS!. The number of office and SST referrals made prior to and following participation in Project PEGS! were also compared to determine the impact of teacher performance on other outcomes of student behavior. The study was designed to determine if teachers working in high and low SES (hypotheses one and two) areas decreased the number of office referrals (hypotheses three, six, and eight) and referrals to SST (hypotheses four, seven, and nine) made following the intervention participation in Project PEGS! (Woods, 2000). Also, the study was designed to analyze adult communication styles (hypothesis five) utilizing the SELF Profile in order to correlate teacher communication styles with effective behavior management as reflected in office referrals and referrals made to SST.

Statements of Null Hypotheses

Nine hypotheses were addressed in this study including the following:

\( H_{01} \): There will be no statistically significant difference in mean pre and post observation scores (instances of ignoring, frequency of interventions, quality rating
scores, negative child responses) for all participants before and after teacher participation in Project PEGS!.

\( H_02: \) There will be no statistically significant difference in mean pre and post observation scores (instances of ignoring, frequency of interventions, quality rating scores, negative child responses) in high and low SES schools respectively before and after teacher participation in Project PEGS!.

\( H_03: \) There will be no statistically significant difference in the mean number of office referrals in high and low SES areas respectively before and after teacher participation in Project PEGS!.

\( H_04: \) There will be no statistically significant difference in the mean number of SST referrals in high and low SES areas respectively before and after teacher participation in Project PEGS!.

\( H_05: \) There will be no statistically significant difference in mean pre and post observation scores (instances of ignoring, frequency of interventions, quality rating scores, negative child responses) among teachers with various communication styles following teacher participation in Project PEGS!.

\( H_06: \) There will be no statistically significant difference in the mean number of office referrals in the third and fourth grade respectively before and after teacher participation in Project PEGS!.

\( H_07: \) There will be no statistically significant difference in the mean number of SST referrals in the third and fourth grade respectively before and after teacher participation in Project PEGS!.
H\textsubscript{08}: There will be no statistically significant difference in the mean number of office referrals received by boys and girls respectively in the third and fourth grade before and after teacher participation in Project PEGS!.

H\textsubscript{09}: There will no statistically significant difference in the mean number of SST referrals received by boys and girls respectively in the third and fourth grade before and after teacher participation in Project PEGS!.

Demographic Information

The location of the study was a large metropolitan county located 30 miles northeast of Atlanta, GA. The current population was 614,500 people with a projected population of 1.2 million by the year 2025. Gwinnett County has been changing rapidly as evidenced in high rates of both international and domestic migration. Between the years of 1990 and 1999, the Census Bureau reported that internationally, 13,892 people had migrated to the county, the third highest number in the state of Georgia. In the same years, 128,086 people had relocated to the county making it first in the state regarding domestic migration. These population changes have been reflected in the student population of the local schools.

Research Design

Sample

The sample consisted of third and fourth grade teachers and their students in two elementary schools in the Gwinnett County Public School System. Of the schools studied, one served a population of students from an area of low socioeconomic status. The other school served students from an area of high socioeconomic status.
Socioeconomic status (SES) was determined according to participation in the free and reduced lunch program.

**Independent Variable**

The independent variable was participation in the Project PEGS training experience used in the study. PEGS! (Practice in Effective Guidance Strategies, 2000) Program CD-ROM, identified as the Project PEGS!, was developed to assist teachers in increasing knowledge and skills in behavior management. After reviewing detailed case studies, teachers participating in the training experience were required to observe and analyze the behavior of various fictional students. Teachers were then required to apply the intervention strategy which was most likely to bring about or continue on-task behavior and implement it in order to ascertain its effectiveness according to subsequent responses provided by the corresponding student in the computer animated classroom activity. The CD-ROM training tool has been programmed to display four varied classroom situations at varying levels of difficulty regarding behaviors presented by the fictional students. In addition to a variety of typical situations, twelve basic intervention strategies are described in detail as one component of the training tool. Also, the teacher using the program was provided with feedback regarding effective and ineffective use of the intervention strategies described summarizing the amount of time spent on task by the fictional students as well as the most and least frequently used intervention strategies. Tips for more effective behavior management in the classroom were provided as a final aspect of the training program.

The validity of the PEGS! Program CD-ROM has been evaluated through field trials. Wood (2000) conducted a study in November and December of three elementary
schools whose principals volunteered to participate. They were asked to select first or second year teachers or those who instructed students identified as difficult to manage in the classroom. Twelve teachers along with 203 students enrolled in pre-K through the third grade participated in the study. Teachers were observed for 30 minutes prior to exposure to the PEGS! Program CD-ROM at a time and during an activity selected by the teachers themselves. One evaluator recorded the number of behavioral interventions used by the teacher as well as the positive and negative responses displayed by students on a minute-by-minute basis. Positive behaviors were noted when the intervention encouraged continued or increased participation on the part of the student. Negative responses were noted when participation ceased or decreased.

A second evaluator simultaneously used a 26-item rating checklist to ascertain the quality of the teacher strategies as well as student responses. Results obtained from the checklist were totaled in order to calculate a quality score. The same observation procedures were repeated after teachers had been given the opportunity to utilize the CD for ten days at self-designated time periods on a daily basis. Teachers were asked to maintain logs and record their experiences as well as given the opportunity to evaluate the training tool at the conclusion of the study period.

As a result of the field study (Wood, 2000), the quality of teacher interventions obtained by assigning a number value to positive and negative teacher and student behavior respectively increased from 93 at the initial observation to 116 at the final observation. A total of 289 instances of negative behavior were recorded in the first observation whereas only 129 were noted in the second observation. Four of the teaching participants had been identified as having no negative behaviors displayed by students in
the first or second observation. Of the other eight participants whose students did display negative behaviors in the initial observation, quality scores increased from an average of 75 in the first observation to an average of 113 in the second observation.

Both the four skilled and eight less skilled teachers consistently used the same four intervention strategies including “motivate with materials,” “provide clear structure,” “praise and encourage,” and “move closer to student.” However those with negatively responding students were more apt to use the techniques of “remind students of rules” and “redirect student to activity” in contradiction to the more highly skilled teachers who utilized “control of materials.” Although teacher selection of preferred intervention strategies varied little after utilizing the training tool, occurrences of negative behavior on the part of students decreased with an initial total of 172 and a final total of 36. The reduction was evidence that although intervention strategies did not change to a noticeable level, strategic implementation of those strategies on the part of the teachers was greatly enhanced. The study also produced positive results regarding the intervention strategy of “planned ignoring” as teachers used this procedure 48% less in the second observation as opposed to the first and students responded negatively 56% less often in the second versus the first.

Teacher evaluations of the training tool indicated that on average each spent three hours total with the instrument throughout the 10-day trial period. Ten of the 12 teachers participating rated the PEGS! Program with a three or higher on a five-point scale regarding satisfaction according to particular items. One indicated that the teacher was greatly dissatisfied with the program. Five indicated the teacher was greatly satisfied with the program. Rated items addressed three primary areas including “content”, the
CD as a “learning opportunity”, and “ease of use”. Overall, results obtained according to limited field studies have provided evidence that the PEGS! Program is a valid instrument regarding the modification of teacher behavior in reference to specific behavior intervention techniques bringing about positive responses on the part of students.

Model Fidelity On Independent Variable

Participants were instructed to use the Project PEGS! CD-Rom training tool for between five and ten hours over a fourteen-day period. The minimum number of hours spent practicing with the tool for any of the participants in the study was one hour and fifteen minutes. The maximum amount of time spent was ten hours and zero minutes. The range was eight hours and forty-five minutes. The average amount of time spent using the tool was five hours and six minutes. The minimum number of sessions was four. The maximum number of sessions was ten. The range was six. The average number of practice sessions was seven. The average time of practice in other studies has been approximately three hours (M.M. Wood, personal communication, March 2004).

Three points of interest are to be noted regarding the high SES group of participants. First, only one of six participants located at the high SES school manipulated the Project PEGS training tool for at least five hours, the minimum time specified by the research design. Second, one of six could be considered a beginning teacher with only two years experience. All other participants had between 10 and 20 years of experience in elementary school programs. Finally, one teacher instructed 27 to 28 students during pre and post observations, a significantly higher number of students than all other participants.
In the low SES group, 8 of 12 teachers manipulated the CD-Rom training tool for between and 5 and 10 hours as specified in the research design. It should also be noted that two of 12 teachers taught a significantly reduced number of students during the post observation period possibly impacting teacher behavior and/or student response patterns.

**Dependent Variables**

The first dependent variable was the difference between pre and post observations scores (instances of ignoring, frequency of interventions, quality rating scores, negative child responses) before and after participation in Project PEGS!. Instances of ignoring occurred when the teacher appropriately ignored the actions of students resulting in on-task behavior. The number of times that the teacher responded to student behavior positively or negatively was identified as the frequency of intervention. Quality rating scores were tabulated to determine the quality of each type of intervention defined on the program as it brought about the occurrence of positive or negative student behavior. Negative child responses were defined as a decrease in student on-task behavior as a response to teacher behavior. The second dependent variable was the number of office referrals received before and after participation in the Project PEGS training program. The third dependent variable was the number of SST referrals received before and after implementation of the Project PEGS training program.

**Group Variables**

Participants in the study were grouped according to four primary variables. First, participants taught at schools within high or low socioeconomic areas. Second, SELF communication profile was used to place teacher participants in one of four categories (S, E, L, or F) according to directive (the need to direct others) and affiliative (the need to be
with others) styles. Third, teacher participants instructed students in either the third or fourth grade. Finally, data were analyzed according to whether students in the study were boys or girls.

Instrumentation

Time Sampling Forms for Project PEGS! Dependent Variables

One of the observers used a form entitled “Time Sampling Worksheet: Adult Strategies That Foster Participation of Young Children” (see Appendix C1) to record the occurrence of thirteen types of teacher interventions described in detail on the Project PEGS! CD-Rom training tool. Teacher and student behavior was recorded as positive (P) or negative (N) respectively and noted each minute during a 15-minute observation period. Using the “Checklist of Adult Strategies That Foster Student Participation” worksheet (see Appendix C2), the alternate observer simultaneously tallied the number of occurrences of each strategy during the specified time period. Descriptive items within each category of intervention were reviewed and rated according to quality. The quality of the intervention was greatest when both teacher and student behavior were positive. Instances of appropriate ignoring were totaled to analyze the difference between pre and post observations scores. Pre and post quality rating scores were obtained by totaling the numbers assigned to concurrent positive and/or negative teacher and student behaviors. Pre and post negative child response scores were tabulated by counting the number of times that a student responded to the teacher intervention in a negative way by decreasing the level of participation.
Reliability for Project PEGS!

The reliability of the relatively recently developed PEGS! Program is being investigated through various field studies conducted by doctoral students and other researchers. As stated previously, an objective of this study has been to further verify the reliability of the instrument regarding its effectiveness in furthering the abilities of teachers in reference to behavior management.

To determine interrater reliability in this study, observers gathered data simultaneously on three different occasions. Regarding frequency data, the mean number of interventions applied per minute were only consistent during the second observation with 4.97 being the average for rater A and 4.26 being the average for rater B. The range of the frequency of interventions was zero to 77 for rater A and zero to 66 for rater B. The standard deviation was 13.45 and 11.60 respectively. During the first observation, the means were inconsistent with 5.48 for rater A and 3.74 for rater B. The range was one to 85 for rater A and one to 58 for rater B. The standard deviations according to the respective raters were 14.82 and 10.12. During the third session, rater A recorded a greater number of interventions (mean=4.39) than rater B (mean=2.90). The range for rater A was zero to 68 and the standard deviation 11.86. The range for rater B was zero to 45 and the standard deviation 7.87.

During observations two and three, the raters were fairly consistent in regard to the means of the quality rating scores. The mean score for rater A was 12.64 with a range of zero to 89 and a standard deviation of 22.86. The mean score for rater B was 13.57 with a range of zero to 95 and a standard deviation of 24.28. During the third observation, a mean score of 14.29 was assigned by rater A with a range of zero to 100
and a standard deviation of 25.93. Rater B assigned a mean score of 13.86 with a range of zero to 97 and a standard deviation of 25.28. During the first observation, the mean scores were 15.00 and 18.57 for raters A and B respectively. According to rater A, the range was zero to 105 with a standard deviation of 27.25. According to rater B, the range was zero to 130 with a standard deviation of 33.02.

A paired sample t-test was conducted to determine the equality of means. The difference between the means of the two observers was found to be statistically significant at the .05 probability level in observations one \( (t=1.98, \ df=30, \ p<.03) \) and three \( (t=1.98, \ df=30, \ p<.03) \). Only during observation two \( (t=1.40, \ df=30, \ p<.09) \) was the difference in the means of the observations found to be not statistically significant. The results raise some questions regarding the reliability of the observers concerning the observed frequencies of teacher interventions used.

Quality rating scores were also simultaneously assigned to a participant by each observer on all 13 categories of interventions to ascertain the level of reliability regarding those scores. Descriptive statistics for each observation session appear in Table 2. Using a paired samples t-test, there was a statistically significant difference in the equality of means only in the first observation \( (t=-1.93, \ df=13, \ p<.04) \) at the .05 probability level. There was no statistically significant difference during observations two \( (t=-1.31, \ df=13, \ p<.10) \) and three \( (t=.68, \ df=13, \ p<.26) \). The results indicate that there was greater reliability concerning the assignment of quality rating scores by the observers.

**SELF Profile**

The SELF-Profile required that each participant respond to 30 items describing how the individual may act in a particular situation or to select a response that describes
them the best. Four styles are identified according to the interaction of the “directive” and “affilitative” scores obtained via self-ratings on the 30-item response portion of the instrument. The affilitative portion addresses the individual’s need or desire to be around other people. The directive score demonstrates the individual’s need or desire to control or direct given situations. Those with high levels of directiveness and strong desires to be around others fall within the “S” quadrant according to the profile. Those with a high desire to control or direct but a low desire to be around others fall within the “E” quadrant. Individuals that possess a low desire to direct or control but a high desire to be around others lie within the “L” quadrant. Those with a low desire to interact socially with others or to direct and control fall within the “F” quadrant of the profile. The summary table that follows reports the descriptors assigned to each communication style according to the SELF-Profile.

The SELF Profile (2000) was developed primarily to assist adults in more effectively understanding their own communication style so that persons may more readily understand how he or she relates to others. This knowledge may make it substantially easier to predict how one may react in a given situation and to improve one’s capacity to more effectively work with individuals of varying styles. The instrument required that individuals rate themselves on a scale of one to five with the least number being “not at all like me” and the highest number being “very much like me” in regard to brief yet specific scenarios as well as brief descriptors of personality traits or characteristics. The self-recorded responses were then used to measure the respondent along two variables affiliative behavior and directive behavior. The profile defined affiliative behaviors as one’s “need or desire to be around others”. It described
directive behaviors as one’s “need or tendency to direct or control situations”. Based on self-reported responses, the evaluatee was then asked to graph his or her results along the two continuums and accordingly assess the strengths and weaknesses of each of the four communicative styles known as S, E, L, or F.

**Forms for Office Referral**

Office referral forms included the following information: 1) name of the student, 2) name of teacher referring student, 3) time and location of offense, 4) special education or regular education status, 5) description of the behavior, 6) previous interventions implemented, and 7) disciplinary action taken.

**Forms for SST Referral**

SST referral forms included the following information: 1) name of the student, 2) name of teacher referring student, 3) current information including grades and testing data, 4) academic areas of concern, 5) behavioral areas of concern, and 5) family background/social history, 6) current interventions, 7) recommendations of the SST committee.

**Data Collection Design**

According to the methodology of the study, the independent variable that relates to each of the four hypotheses is participation in the Project PEGS training experience. Two trained observers gathered pre-intervention data at the high SES school on October 20-21, 2003. Participating teachers were then given the opportunity to manipulate the CD-Rom training tool for 15 days. Post-intervention data was collected on November 10-11, 2003. The same procedure was followed at the school serving students from a low
SES background with pre-intervention data being collected on October 15-17, 2003 and post-intervention data gathered on November 5-7, 2003.

Observation periods consisted of two consecutive 15-minute time segments. Three types of data were collected. First, the frequency of teacher strategies used was noted in relation to two other dimensions of the classroom environment. Those dimensions included positive or negative teacher behavior as well as positive or negative student outcomes regarding increased or decreased participation in the activity. To denote those occurrences, teacher and student behaviors were assigned a set of initials. They were as follows: a) positive teacher behavior/improved student participation=PP, b) positive teacher behavior/ unimproved student participation=PN, c) negative teacher behavior/ improved student participation=NP, d) negative teacher behavior/ unimproved student participation=NN, e) not observed=NO, f) unnecessary use of strategy=UN, and g) inconsistent use of strategy=IN. The categories of interventions noted during the observation periods included the following: a) ignore behavior, b) motivate with materials and activities, c) encourage and praise, d) organize materials, e) provide students with clear expectations and explanations of procedure (structure), f) remind students of rules, g) proximity control to display awareness, h) reflect student’s positive words and/or actions, i) redirect to activity, j) interpret feelings in student’s words or actions, k) confront unacceptable behavior, l) removal from the group (time-out), and l) removal from the room. All of the interventions were consistent with those presented on the CD-rom training tool used by the participants.

Second, the alternate observer simultaneously noted the effectiveness of positive and/or negative teacher behavior used in bringing about active or inactive student
participation. Each category of intervention was divided into smaller, more specific strategies to be considered. For example, the observer assigned denotations such as “PP” for positive teacher behavior/increased student participation or “NO” when a specific strategy such as “adult speaks firmly and without emotion” was not observed. Quality rating (QR) scores were obtained for each category of intervention as well as a total for each participant. QR scores were obtained by adding together the ranked values of the relationship between positive/negative teacher behavior and positive/negative student behavior. Ranked values assigned to each set of teacher behavior and student outcomes were as follows:

- Positive teacher behavior/increased student participation (PP)=5
- Negative teacher behavior/increased student participation (NP)=4
- Positive teacher behavior/decreased student participation (PN)=3
- Unnecessary use of intervention (UN)=2
- Inconsistent use of intervention (IN)=1
- Not observed (0)
- Negative teacher behavior/decreased student participation (NN)=-5

The final set of data obtained for each participant regarding Project PEGS was an overall quality rating score (QR/Fi). The skill score was obtained by dividing the total quality rating on the skill score or checklist form by the frequency of teacher interventions as recorded on the time sampling data forms. This resulted in an average skill score of the actual teacher strategies observed. Adjusted scores from pre- to post-observation data were done due to the consideration that all strategies may not be required during the time period in which teachers were observed.

The data concerning frequency of intervention, effectiveness of interventions, and final skill scores were tabulated and recorded to analyze gains and losses prior to and following participation in Project PEGS in four focused areas. Those areas included: a)
instances of ignoring when an intervention should have been utilized, b) total instances of intervention, c) quality rating score, and d) occurrence of negative child responses to teacher behavior. Differences between instances of ignoring on pre and post measures were not considered as only three of 18 participants were given a score in that area during the initial observation phase. The difference between instances of intervention on pre and post measures was significant as well as the difference between skill scores. The difference between negative child responses prior to and following participation in PEGS was also considered to be significant.

Administrative personnel at the local school to maintain confidentiality of student information reviewed office and SST referral forms. The administrator noted on a “Participant Information Form” (see Appendix C3) the name of the participant, an identification code, the number of office and SST referrals, the sex of the students receiving the referrals, the behaviors identified on the referrals, and the interventions used. Pre-intervention data at the high SES school were collected from August 11, 2003, to October 20, 2003. Post-intervention data was collected from November 10, 2003, to December 19, 2003. Pre-intervention data were collected at the low SES school from August 11, 2003, to October 15, 2003. Post-intervention data were collected from November 6, 2003, to December 19, 2003.

Level of Significance

Significance level pertains to the possibility of making a Type I error. A Type I error occurs when the null hypothesis is rejected when it is actually true. A significance level of .05 will be used in this study meaning that the researcher is willing to take the
risk that the decision to falsely reject the null hypothesis may be incorrect five percent of the time.

Statistical Analyses

Scores according to the procedures described on the PEGS! Program CD-ROM behavior management training instrument before and after its implementation were used in order to ascertain teacher effectiveness regarding behavior intervention techniques. Communication styles among teachers were explored utilizing the SELF Profile. Data acquired from information provided on office and SST referrals before and after training were used to address issues of socioeconomic status, grade, and sex.

All of the above information were in a pretest-posttest preexperimental design. Inferential statistics were used incorporating paired and independent samples t-tests to analyze the data. A one way analysis of covariance was also used to analyze differences in the means on post observation data.
CHAPTER IV

RESULTS

The purpose of the study was to determine if teacher knowledge and skills on behavior management could be increased in third and fourth grade classrooms in a metropolitan area using Project PEGS!. The instrumentation involved in the study included the PEGS! (Practice in Effective Guidance Strategies) Program CD-ROM (Wood, 2000) and the SELF Profile (2000). The SELF Profiles were included in the study to gather data regarding whether specific adult communication styles were more effective regarding behavior management in the classroom. Also, pre-intervention office and SST referrals were analyzed and compared to post-intervention office and SST referral data.

The original research design reported that schools considered being in low, middle, and high socioeconomic status (SES) areas according to participation in the free and reduced lunch program would be selected for participation in the study. However, the educational leaders contacted at the middle SES schools reported previous and ongoing involvement in school-wide behavior management programs as a result of steadily increasing disciplinary issues among students. Those individuals expressed concern regarding whether or not teachers should be asked to participate in further activities, as the programs currently in place were rather time-consuming and involved. Also, there was concern about the validity of the results of the study if other interventions were already in place. Therefore, the decision was made to only include one elementary school from a high SES area and one elementary school from a low SES area.
Local School Demographic Information

According to the 2002-2003 Results-Based Evaluation System (RBES) accountability report developed by local schools according to Gwinnett County Public School System guidelines (Gwinnett County Board of Education, 2003), the school located in a high SES area reported that 2.1% of the 1,635 students (see Table 1) were enrolled participated in the free/reduced lunch program in 2001-2002. Students participating in the English as a Second Language (ESOL) program comprised 2.3% of the population. Average daily attendance was reported to be 96.7%. The racial diversity of the student population was as follows: 80.6% white, 5.0% African American, 0.1% American Indian, 7.7% Asian, 3.9% Hispanic and 2.8% multiracial.

According to 2001-2002 criterion-Referenced Competency Test (CRCT) results, third grade students earned scores of 92% or higher on all four sections of the reading test, 94% or higher in each section of the language arts component, 93% or higher in all five sections of the mathematical portion, 90% or higher in all four sections of the science component, and 88% or higher in the area of social studies. Average scaled scores in the area of reading (357) were 13 points higher than the average of other Gwinnett County Schools and 20 points higher than the average of other schools in Georgia.

Average scores on the language arts (348) component of the test were 12 points higher than the average of other Gwinnett County Schools and 20 points higher than other schools in Georgia. Regarding mathematics, the average scaled scores (349) were 16 points higher than other Gwinnett County Schools and 22 points higher than other schools in Georgia. On the Grade four Gateway Assessment, 89.7% of students scored in the effective or excellent rage in the language arts portion of the test according to 2001-
2002 data. 77.9% scored in the effective or excellent range in the area of mathematics.
86.3% scored in the effective or excellent range in the area of Science. 84.1% of scores
fell within the effective or excellent range in the area of social studies. 47% of the
teachers on staff held a master’s degree or higher. Approximately 26% of all teachers
had between one and five years of teaching experience. Approximately 29% had
between six and ten years of teaching experience. About 23% had between 11 and 15
years of experience. Around 5% had between 16 and 20 years of experience. A little
more than ten percent had between 21 and 25 years of experience. Approximately 5%
had more than 25 years of experience.

According to the 2002-2003 RBES accountability report the school located in the
low SES area stated that 68.3% of the 910 students enrolled participated in the
free/reduced lunch program in the 2001-2002 school year. Students participating in the
ESOL program comprised 29.2% of the student population. The average daily
attendance was 95.7%. The racial make-up of the school was as follows: 15.4% white,
29.7% African American, 0.1% American Indian, 8.7% Asian, 42.5% Hispanic, and 3.5%
multiracial. In addition to vast discrepancies in the level of financial assistance provided
to students and racial make-up of the local school, test scores differed significantly on
comparable measures. For example, the average scaled score for third grade students on
the reading component of the CRCT was 325, 32 points below that of the previous school
as well as 22 points below that of the Gwinnett County average and 12 points below that
of the state of Georgia.

The average scaled score on the language arts portion of the test was 324, 24
points below that of the previous school as well as 12 points below the Gwinnett County
average and 4 points below that of the state of Georgia. The school located within the low SES area attained a score of 319 on the mathematics portion of the test. The score was 30 points below that of the previous school resulting in a score falling 14 points below that of the Gwinnett County average and eight points below that of the state of Georgia. Regarding scores obtained on the Grade four Gateway Assessment in the 2001-2002 school year, 73.3% of student scores were considered to be effective or excellent in the area of language arts. In mathematics, 48.4% of the scores fell within that range. In the area of science, 61.8% of the scores were effective or excellent. In social studies, 52.8% were within that range.

Discrepancies regarding percentages of students considered to be passing the measure between the two schools were 19.4% in language arts, 29.5% in mathematics, 24.5% in science, and 31.3% in social studies. Of the teachers on staff, 51% held a master’s degree or higher. Approximately 42% of the teachers on staff had between one and five years of experience according to 2001-2002 data. A little over 27% had between six and ten years of experience. About 14% had between 11 and 15 years of experience. Approximately 7% had between 16 and 20 years of experience. A little over 6% had between 21 and 25 years of experience. One percent of the teacher population had over 26 years of experience.

The nature of the highlights, information provided in addition to the key results relating to the Local School Plans for Improvement (LSPIs), reported by the two different schools were worthy of noting. The school located in the high SES area reported activities such as the availability of after-school programs in areas such as art, chorus, service, computer, fitness, and the environment.
<table>
<thead>
<tr>
<th></th>
<th>High SES Elementary</th>
<th>Low SES Elementary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Enrollment</strong></td>
<td>1,635</td>
<td>910</td>
</tr>
<tr>
<td>% Free/Reduced Lunch</td>
<td>2.1</td>
<td>68.3</td>
</tr>
<tr>
<td>% of ESOL Students</td>
<td>2.3</td>
<td>29.2</td>
</tr>
<tr>
<td>Average Daily Attendance</td>
<td>96.7%</td>
<td>95.7%</td>
</tr>
<tr>
<td>% White</td>
<td>80.6</td>
<td>15.4</td>
</tr>
<tr>
<td>% African American</td>
<td>5.0</td>
<td>29.7</td>
</tr>
<tr>
<td>% American Indian</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>% Asian</td>
<td>7.7</td>
<td>8.7</td>
</tr>
<tr>
<td>% Hispanic</td>
<td>3.9</td>
<td>42.5</td>
</tr>
<tr>
<td>% Multiracial</td>
<td>2.8</td>
<td>3.5</td>
</tr>
<tr>
<td>CRCT Reading Score</td>
<td>357</td>
<td>325</td>
</tr>
<tr>
<td>CRCT LA Score</td>
<td>348</td>
<td>324</td>
</tr>
<tr>
<td>CRCT Math Score</td>
<td>349</td>
<td>319</td>
</tr>
<tr>
<td>% Passing LA Gateway</td>
<td>89.7</td>
<td>70.3</td>
</tr>
<tr>
<td>% Passing Math Gateway</td>
<td>77.9</td>
<td>48.4</td>
</tr>
<tr>
<td>% Passing Science Gateway</td>
<td>86.3</td>
<td>61.8</td>
</tr>
<tr>
<td>% Passing SS Gateway</td>
<td>84.1</td>
<td>52.8</td>
</tr>
<tr>
<td>% of Teachers With Master’s Degree or Higher</td>
<td>47</td>
<td>51</td>
</tr>
<tr>
<td>Approx. % of Teachers With 1-5 Years of Exp.</td>
<td>26</td>
<td>42</td>
</tr>
<tr>
<td>Approx. % of Teachers With 6-10 Years of Exp.</td>
<td>29</td>
<td>27</td>
</tr>
<tr>
<td>Approx. % of Teachers With 11-15 Years of Exp.</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>Approx. % of Teachers With 16-20 Years of Exp.</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Approx. % of Teachers With 21-25 Years of Exp.</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Approx. % of Teachers With 26+ Years of Exp.</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>
They also reported the production of a morning news show developed by fifth grade students. German was a course of study offered to students in the first and second grades. The PTA sponsored such events as a Science Fair, after-school dances, and an International Festival.

The school from the low SES school reported such happenings as the establishment of a formal partnership between themselves and Georgia State University in order to train future educators providing elementary students with increased levels of instruction, presentations to various leadership teams throughout Gwinnett County regarding Guided Reading Programs and the establishment of computerized databases in order to more effectively manage student information. Family Nights were also offered on a monthly basis that included information related to the curriculum such as Technology and Literacy Night as well as ideas related to diversity such as International Fiesta Night and Black History Night.

Participants at the high SES school were given the choice to participate in the proposed research study in exchange for two Staff Development Units (SDUs). However, only 6 of 22 teachers elected to participate. All third and fourth grade teachers participated at the school in the low SES area as mandated by the local school administrator as an alternative to a year-long guided reading study in which other teachers were required to participate. It should be noted that the administrative personnel at both schools were highly supportive of the program as they assisted the researcher in scheduling large group meetings to offer teachers an overview of the study, assisted the researcher in establishing open lines of communication, and readily gathered the necessary information to assist in data analysis.
Participant Demographic Information

Data on each participant were collected regarding grade level taught, number of children taught, total practice time, and the number of practice sessions using Project PEGS!. Only one male participated in the study; the remainder was female. Three out of six teachers at the high SES school taught the fourth grade. Six out of 12 teachers at the low SES school taught fourth grade. The number of students taught at the high SES school ranged from a minimum of 14 to a maximum of 28 during observations sessions. The minimum number of students taught at the low SES school was four and the maximum was 22 during observations sessions.

One out of six teacher participants at the high SES school spent the maximum time of ten hours using Project PEGS!. Two teachers from the high SES school used the instrument for a total of 4 hours and 45 minutes. Two other participants used Project PEGS! for three hours and 50 minutes and three hours respectively. One participant used the instrument for one hour and 15 minutes. One out of 12 participants at the low SES school participated in Project PEGS! for 10 hours. One participant used the tool for a little over six hours. Six out of 12 used the instrument for between 5 and 6 hours. Three out of 12 used Project PEGS! for between 4 and 5 hours. One participant used the tool for slightly more than three hours.

The number of practice sessions for teacher participants in the high SES group ranged from five to ten with an average of seven. The participant who used Project PEGS! for 10 hours also reported 10 practice sessions. The participant that used the tool the least, 1 hour and 15 minutes, reported participating in 8 practice sessions. The number of practice sessions for teacher participants in the low SES group ranged from 4
to 10 with an average of approximately 8. The participant who used Project PEGS! for 10 hours also reported 10 sessions. The participant that used the tool for the minimal amount of time of 4 hours and 10 minutes also reported the lowest number of practice sessions.

**Anecdotal Reports**

Four out of 18 participants commented that the Project PEGS! CD-Rom training tool was most likely effective for beginning teachers but not more experienced ones. For example, participant E stated, “I think this program may benefit beginning teachers and help them to build a toolbox of useful strategies.” Four out of 18 expressed frustration with perceived repetitiveness of Project PEGS!. Participant Q states:

> Options in responding to behaviors were also extremely limited. The game was generally ‘won’ with a lot of praise, ignoring and periodic redirection. The students with whom I work often need constant redirection. I really didn’t learn any new methods of class control, nor did the program really improve my class management.

Participant G expressed agreement by saying, “After a couple of times, it becomes obvious that positive encouragement is the way to get a child’s attention and encourage participation.” Participant K praised the program stating, “I like the program. It was a lot of fun.” Nine participants did not provide comments reporting their impressions of the training tool.

**Descriptive and Inferential Statistical Data**

The data were analyzed to determine whether there were significant differences among groups according to SES, communication style, grade, and sex prior to and following participation in Project PEGS!. Descriptive statistics including the number of participants, range, mean, and standard deviation were tabulated. A paired two-sample t-
test was used to determine the equality of the means on pre and post measures. A one-way analysis of covariance was used to test for statistical significance between mean scores on post observation data. There was no analysis of the Instances of Ignoring dependent variable because there was insufficient variance for analysis, i.e., most scores were “0.”

\[ H_{01} \] Analyses for Dependent Variable for All Participants:

There is a statistically significant difference between the means of pre and post-observation scores for all participants before and after teacher participation in Project PEGS! regarding instances of intervention and quality rating scores. There is no statistically significant difference between the means of pre and post observation scores regarding negative child responses.

Descriptive Statistics

Descriptive statistics for the scores of all participants on pre and post observation measures appear on Table 2. The range of instances of interventions prior to participation in Project PEGS! was 14 to 103 with a mean of 52.11 and a standard deviation of 20.81. The range following participation in Project PEGS! was 11 to 64 with a mean of 32.44 and a standard deviation of 16.36. Quality rating scores increased as the range prior to participation in Project PEGS! was 1.2 to 6.8 and the range following participation in Project PEGS! was 1.4 to 7.4. The mean prior to participation in Project PEGS! was 2.23 with a standard deviation of 1.27. The mean of quality rating scores following participation in Project PEGS! was 3.86 with a standard deviation of 1.99. Negative child responses decreased after participation in Project PEGS!.
initial range was 0 to 15 with a mean of 1.78 and a standard deviation of 3.87. The final range was 0 to 3 with mean of .22 and a standard deviation of .73.

Inferential Statistics

A paired two-sample t-test was used to test for statistical significance between the Pre-Intervention and Post-Intervention means in three categories of analysis. The difference between instances of intervention prior to and following participation in Project PEGS was statistically significant ($t=4.25$, df=17, $p<.001$) (two-tailed) between the two means with the Post-Intervention score being statistically significantly lower than the Pre-Intervention score. Practically, there was a statistically significant reduction in the number of instances of intervention after the implementation of Project PEGS! This result suggests the need for additional analyses to determine possible differences based on other group characteristics.

The paired t-test was used to test for statistical significance between the Pre-Quality mean and the Post-Quality mean. The calculated t-value (df=17) was $t=3.67$ ($p<.002$) (two-tailed). This result demonstrates that there was a statistically significant difference between the two means with the Post-Quality score being statistically significantly higher than the Pre-Quality score. Practically, there was a statistically significant increase in the quality of implementation of Project PEGS! after the training. This result suggests the need for additional analyses to determine possible differences based on other group characteristics.

The paired t-test was used to test for statistical significance between the Pre-Negative Child Response mean and the Post-Negative Child Response mean. The calculated t-value (df=17) was $t=1.98$, ($p<.06$) (two-tailed). This result demonstrates that
Table 2
DESCRIPTIVE STATISTICS FOR ALL PARTICIPANTS (n=18)

<table>
<thead>
<tr>
<th></th>
<th>Instances of Intervention</th>
<th>Quality Rating Scores</th>
<th>Negative Child Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Pre)</td>
<td>(Post)</td>
<td>(Pre)</td>
</tr>
<tr>
<td>range</td>
<td>14-103</td>
<td>11-64</td>
<td>1.2-6.8</td>
</tr>
<tr>
<td>mean</td>
<td>52.11</td>
<td>32.44</td>
<td>2.23</td>
</tr>
<tr>
<td>SD</td>
<td>20.81</td>
<td>16.36</td>
<td>1.27</td>
</tr>
<tr>
<td>t</td>
<td>1.74</td>
<td></td>
<td>3.67</td>
</tr>
</tbody>
</table>
there was no statistically significant difference between the two means for Negative Child Response. Practically, there was a decrease in the number of Negative Child Responses after the implementation of Project PEGS! training.

**H₀₂: Analyses for Dependent Variable by SES**

There is no statistically significant difference in the post observation mean scores (as adjusted for pre observation scores) between students who are not eligible for Free/Reduced School Lunch (Non/FR) and students who are eligible for Free/Reduced School Lunch (F/R) regarding instances of intervention, quality rating scores, and negative child responses.

**Descriptive Statistics**

Descriptive statistics for the scores of participants located at the high (Non/FR) SES school on pre and post observation measures in three categories of analysis appear on Table 3. Descriptive statistics for the scores of participants located at the low (F/R) SES school on pre and post-observation measures in three categories of analysis appear on Table 4.

Instances of intervention decreased at approximately the same rate for both groups when comparing data before and after teacher participation in Project PEGS!. Mean scores for the two groups were similar as the high (Non F/R) SES group score decreased from 51.67 to 35.17 and the low (F/R) SES score from 52.33 to 31.08. Quality rating scores for both groups also decreased at approximately the same rate when comparing means before and after using the training tool. For example, quality rating scores for the high (Non/FR) SES group increased by 1.7 overall whereas scores for the low (F/R) SES group increased by 1.59. The overall decrease in negative child responses
was more substantial for the low (F/R) SES group than the high (Non/FR) SES group. The mean of the high (Non/FR) SES group decreased from .67 to 0 whereas the mean of the low (F/R) SES group decreased moving from 2.33 to .33. However, consideration should be given to the fact that seven out of 12 (58%) of the participants had no negative responses from students in pre or post intervention data. One out of 12 had no negative responses during the initial observation phase. However, that participant did experience one negative response in post observation sessions. Four participants out of the group of 12 were primarily responsible for the difference between the high (Non/FR) and low (F/R) SES schools regarding negative child response data as initial very high levels of negative responses decreased dramatically during the post-observation phase.

**Inferential Statistics**

A one-way analysis of covariance was used to test for statistical significance between mean scores for Post-Intervention (as adjusted for Pre-Intervention scores) for the two groups of students. Inferential statistics appear on Table 5. There was no statistically significant difference between the means (adjusted for Pre-Intervention scores) for Post-Intervention for F/R and the Non-F/R groups (F(1,15) = .32; p < .58). This result demonstrates that there was no statistically significant difference in mean Post-Intervention scores between the two groups.

A one-way analysis of covariance was used to test for statistical significance between mean scores for Post-Quality (as adjusted for Pre-Quality scores) for the two groups of students. Inferential statistics appear on Table 6. There was no statistically significant difference between the means (adjusted for Pre-Quality scores) for Post-Quality for F/R and the Non-F/R groups (F(1,15) = .001; p < .98). This result demonstrates
### Table 3
DESCRIPTIVE STATISTICS FOR HIGH (Non/FR) SES PARTICIPANTS (n=6)

<table>
<thead>
<tr>
<th>Instances of Intervention</th>
<th>Quality Rating Scores</th>
<th>Negative Child Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Pre)</td>
<td>(Post)</td>
</tr>
<tr>
<td>range</td>
<td>35-67</td>
<td>11-64</td>
</tr>
<tr>
<td>mean</td>
<td>51.67</td>
<td>35.17</td>
</tr>
<tr>
<td>SD</td>
<td>13.88</td>
<td>20.10</td>
</tr>
</tbody>
</table>

### Table 4
DESCRIPTIVE STATISTICS FOR LOW (F/R) SES PARTICIPANTS (n=12)

<table>
<thead>
<tr>
<th>Instances of Intervention</th>
<th>Quality Rating Scores</th>
<th>Negative Child Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Pre)</td>
<td>(Post)</td>
</tr>
<tr>
<td>range</td>
<td>14-103</td>
<td>15-64</td>
</tr>
<tr>
<td>mean</td>
<td>52.33</td>
<td>31.08</td>
</tr>
<tr>
<td>SD</td>
<td>24.12</td>
<td>14.97</td>
</tr>
</tbody>
</table>
that there was no statistically significant difference in mean Post-Quality scores between the two groups.

A one-way analysis of covariance was used to test for statistical significance between mean scores for Post-Negative Child Response scores (as adjusted for Pre-Negative Child Response scores) for the two groups of students. Inferential statistics appear on Table 7. There was no statistically significant difference between the means (adjusted for Pre-Negative Child Response scores) for Post-Negative Child Responses for F/R and the Non-F/R groups (F(1,15) = .13; p < .72). This result demonstrates that there was no statistically significant difference in mean Post-Negative Child Response scores between the two groups.

**H03: High vs Low SES Office Referrals**

There is no statistically significant difference in the Post-Office Referral mean scores (as adjusted for Pre-Office Referral scores) between students who are eligible for Free/Reduced School Lunch (F/R) and students who are not eligible for Free/Reduced School Lunch (Non/FR).

**Descriptive Statistics**

Descriptive statistics for the number of office referrals made by teachers at high and low SES schools following the intervention appear in Table 8. The means of referrals made were fairly equivalent in both locations. The means for the low (F/R) and high (Non/FR) were 1.17 and .33 respectively. The standard deviation for the low (F/R) SES school was 2.13. The standard deviation for the high (Non/FR) SES school was .82.
Table 5: Summary Table for One Way Analysis of Covariance for Post-Intervention Scores (with Pre-Intervention Scores as the Covariate) for Students Eligible for Free/Reduced School Lunch as Compared to Students Not Eligible for Free/Reduced School Lunch

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>1046.21</td>
<td>2</td>
<td>523.10</td>
<td>2.24</td>
<td>.141</td>
</tr>
<tr>
<td>Intercept</td>
<td>466.07</td>
<td>1</td>
<td>466.07</td>
<td>1.99</td>
<td>.178</td>
</tr>
<tr>
<td>Pre-Intervention</td>
<td>979.51</td>
<td>1</td>
<td>979.51</td>
<td>4.19</td>
<td>.059</td>
</tr>
<tr>
<td>F/R vs. Non-F/R</td>
<td>74.86</td>
<td>1</td>
<td>74.86</td>
<td>.32</td>
<td>.58</td>
</tr>
<tr>
<td>Error</td>
<td>3506.24</td>
<td>15</td>
<td>233.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23500.00</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>4552.44</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6: Summary Table for One Way Analysis of Covariance for Post-Quality Scores (with Pre-Quality Scores as the Covariate) for Students Eligible for Free/Reduced School Lunch as Compared to Students Not Eligible for Free/Reduced School Lunch

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>10.83</td>
<td>2</td>
<td>5.42</td>
<td>1.44</td>
<td>.27</td>
</tr>
<tr>
<td>Intercept</td>
<td>25.02</td>
<td>1</td>
<td>25.02</td>
<td>6.63</td>
<td>.02</td>
</tr>
<tr>
<td>Pre-Quality</td>
<td>10.79</td>
<td>1</td>
<td>10.79</td>
<td>2.86</td>
<td>.11</td>
</tr>
<tr>
<td>F/R vs. Non-F/R</td>
<td>.003</td>
<td>1</td>
<td>.003</td>
<td>.001</td>
<td>.977</td>
</tr>
<tr>
<td>Error</td>
<td>56.61</td>
<td>15</td>
<td>3.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>335.02</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>67.44</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 7: Summary Table for One Way Analysis of Covariance for Post-Negative Child Response Scores (with Pre-Negative Child Response Scores as the Covariate) for Students Eligible for Free/Reduced School Lunch as Compared to Students Not Eligible for Free/Reduced School Lunch

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>5.66</td>
<td>2</td>
<td>2.83</td>
<td>12.29</td>
<td>.001</td>
</tr>
<tr>
<td>Intercept</td>
<td>.04</td>
<td>1</td>
<td>.04</td>
<td>.17</td>
<td>.69</td>
</tr>
<tr>
<td>Pre-Negative Child</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response</td>
<td>5.21</td>
<td>1</td>
<td>5.21</td>
<td>22.65</td>
<td>.00</td>
</tr>
<tr>
<td>F/R vs. Non-F/R</td>
<td>.03</td>
<td>1</td>
<td>.03</td>
<td>.134</td>
<td>.72</td>
</tr>
<tr>
<td>Error</td>
<td>3.45</td>
<td>15</td>
<td>.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10.00</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>9.11</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Inferential Statistics

A one-way analysis of covariance was used to test for statistical significance between mean scores for Post-Office Referrals (as adjusted for Pre-Office Referral scores) for the two groups of students. Inferential statistics appear on Table 9. There was no statistically significant difference between the means (adjusted for Pre-Office Referral scores) for Post-Office Referrals for F/R and the Non-F/R groups (F(1,15) = .80; p < .39). This result demonstrates that there was no statistically significant difference in mean Post-Office Referrals scores between the two groups.

H04: High vs Low SES SST Referrals

There is no statistically significant difference in the Post-SST Referral mean scores (as adjusted for Pre-SST Referral scores) between students who are eligible for Free/Reduced School Lunch (F/R) and students who are not eligible for Free/Reduced School Lunch (Non/FR).

Descriptive Statistics

Descriptive statistics for the number of SST referrals made by teachers at high and low SES schools following the intervention appear in Table 10. The means of referrals made were fairly equivalent in both locations. The mean for the low (F/R) and high (Non/FR) were 1.42 and .50 respectively. The standard deviation for the low (F/R) SES school was 1.88. The standard deviation for the high (Non/FR) SES school was .55.

Inferential Statistics

A one-way analysis of covariance was used to test for statistical significance between mean scores for Post-SST Referrals (as adjusted for Pre-SST Referral scores) for
Table 8
DESCRIPTIVE STATISTICS FOR HIGH (Non/FR) AND LOW (F/R) SES PARTICIPANTS

<table>
<thead>
<tr>
<th>Number of Post Office Referrals</th>
<th>(F/R)</th>
<th>(Non/FR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>n</code></td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td><code>range</code></td>
<td>0-6</td>
<td>0-2</td>
</tr>
<tr>
<td><code>mean</code></td>
<td>1.17</td>
<td>.33</td>
</tr>
<tr>
<td><code>SD</code></td>
<td>2.13</td>
<td>.82</td>
</tr>
</tbody>
</table>
Table 9: Summary Table for One Way Analysis of Covariance for Post-Office Referral Scores (with Pre-Office Referral Scores as the Covariate) for Students Eligible for Free/Reduced School Lunch as Compared to Students Not Eligible for Free/Reduced School Lunch

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>3.69</td>
<td>2</td>
<td>1.84</td>
<td>.53</td>
<td>.60</td>
</tr>
<tr>
<td>Intercept</td>
<td>9.55</td>
<td>1</td>
<td>9.55</td>
<td>2.75</td>
<td>.12</td>
</tr>
<tr>
<td>Pre-Office Referral</td>
<td>.91</td>
<td>1</td>
<td>.91</td>
<td>.26</td>
<td>.62</td>
</tr>
<tr>
<td>F/R vs. Non-F/R</td>
<td>2.78</td>
<td>1</td>
<td>2.78</td>
<td>.80</td>
<td>.39</td>
</tr>
<tr>
<td>Error</td>
<td>52.09</td>
<td>15</td>
<td>3.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>70.00</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>55.78</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the two groups of students. Inferential statistics appear on Table 11. There was no statistically
significant difference between the means (adjusted for Pre-SST Referral scores) for Post-SST
Referrals for F/R and the Non-F/R groups (F(1,15) =1.23; p<.38). This result demonstrates that
there was no statistically significant difference in mean Post-SST Referrals scores between the
two groups.

\textbf{H05: Analysis of Dependent Variable by Communication Style}

Note: Because of the distribution of communication styles of teachers (S=2; E=3; L=3;
and F=12) it was not possible to analyze the data for Hypothesis H05. However, visual
inspection was conducted of the available data in a descriptive manner. Descriptive statistics
appear in Table 12.

\textbf{Descriptive Statistics}

The instrument required participants to identify the communication style that is most
representative of themselves according to the responses given. It also asks the participant to
identify others that might belong in each of the three other quadrants emphasizing the qualities
that may make it difficult or easy to get along with certain individuals. The profile also gives the
participant tips on how to deal with individuals in each of the four areas.

Participants located at the high SES school were equally distributed among three of four
quadrants. Eight of the twelve participants located at the low SES school identified themselves
as having an “F” communication style. The \textit{E} group demonstrated the least reduction in instances
of intervention. Quality rating mean scores for the \textit{S, L,} and \textit{F} groups increased from pre to post
observation measures. All groups demonstrated decreases in the mean number of negative child
responses. The \textit{S, E,} and \textit{F} groups showed a slight increase in the mean number of office
Table 10

DESCRIPTIVE STATISTICS FOR HIGH (Non/FR) AND LOW (F/R) SES PARTICIPANTS

<table>
<thead>
<tr>
<th>Number of Post SST Referrals</th>
<th>(F/R)</th>
<th>(Non/FR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>range</td>
<td>0-5</td>
<td>0-1</td>
</tr>
<tr>
<td>mean</td>
<td>1.42</td>
<td>.50</td>
</tr>
<tr>
<td>SD</td>
<td>1.88</td>
<td>.55</td>
</tr>
</tbody>
</table>
Table 11: Summary Table for One Way Analysis of Covariance for Post-SST Referral Scores (with Pre-SST Referral Scores as the Covariate) for Students Eligible for Free/Reduced School Lunch as Compared to Students Not Eligible for Free/Reduced School Lunch

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>6.42</td>
<td>2</td>
<td>3.21</td>
<td>1.29</td>
<td>.30</td>
</tr>
<tr>
<td>Intercept</td>
<td>1.11</td>
<td>1</td>
<td>1.11</td>
<td>.45</td>
<td>.51</td>
</tr>
<tr>
<td>Pre-Office Referral</td>
<td>3.06</td>
<td>1</td>
<td>3.06</td>
<td>1.23</td>
<td>.29</td>
</tr>
<tr>
<td>F/R vs. Non-F/R</td>
<td>2.08</td>
<td>1</td>
<td>2.08</td>
<td>.84</td>
<td>.38</td>
</tr>
<tr>
<td>Error</td>
<td>37.36</td>
<td>15</td>
<td>2.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>66.00</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>43.78</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
referrals. Regarding SST, the number of referrals issued remained constant from pre to post observation phases for the S and E groups. Variances existed among L and F groups.

H₀₆: Third vs Fourth Grade Office Referrals

There is no statistically significant difference in the Post-Office Referral mean scores (as adjusted for Pre-Office Referral scores) between students who are in the third grade and those in the fourth grade.

Descriptive Statistics

Descriptive statistics for the number of office referrals made by teachers in the third and fourth grade following the intervention appear in Table 13. The range of the number of office referrals issued to third grade students following participation in Project PEGS! was 0 to 5. The mean number of office referrals was .56. The standard deviation was 1.67. The range following participation in Project PEGS! was 0 to 6. The respective mean was 1.22. The standard deviation was 1.99.

Inferential Statistics

A one-way analysis of covariance was used to test for statistical significance between mean scores for Post-Office Referrals (as adjusted for Pre-Office Referral scores) for the students in the third grade and the fourth grade. Inferential statistics appear in Table 14. There was no statistically significant difference between the means (adjusted for Pre-Office Referral scores) for Post-Office Referrals for third graders and for fourth graders (F(1,15) = .76; p<.40). This result demonstrates that there was no statistically significant difference in mean Post-Office Referrals scores between the two groups.
H₀₇: Third vs Fourth Grade SST Referrals

There is no statistically significant difference in the Post-SST Referral mean scores (as adjusted for Pre-SST Referral scores) between students who are in the third grade and those in the fourth grade.

**Descriptive Statistics**

Descriptive statistics for the number of SST referrals made by teachers in the third and fourth grade following the intervention appear in Table 15. The range of the number of SST referrals made for third grade students following participation in Project PEGS! was 0 to 4. The mean was 1.44. The standard deviation was 1.59. The range of the SST referrals made for fourth grade students following participation in Project PEGS! was 0 to 5. The mean was .78 and the standard deviation was 1.64.

**Inferential Statistics**

A one-way analysis of covariance was used to test for statistical significance between mean scores for Post-SST Referrals (as adjusted for Pre-SST Referral scores) for the students in the third grade and the fourth grade. Inferential statistics appear in Table 16. There was no statistically significant difference between the means (adjusted for Pre-SST Referral scores) for Post-SST Referrals for third graders and for fourth graders (F(1,15) =2.34; p<.15). This result demonstrates that there was no statistically significant difference in mean Post-SST Referrals scores between the two groups.

H₀₈: Boys vs Girls Office Referrals

There is no statistically significant difference in the mean number of office referrals received by boys and girls respectively in the third and fourth grade before and after teacher participation in Project PEGS!.
**Table 12**: Descriptive Data [Means (Standard Deviations)] for All Dependent Variables for Four Communication Styles of Teachers for Total Group (n=18)

<table>
<thead>
<tr>
<th>Variable</th>
<th>S (n=2)</th>
<th>E (n=3)</th>
<th>L (n=3)</th>
<th>F (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project PEGS!</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instances of Intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>55.5 (14.85)</td>
<td>36.33 (23.59)</td>
<td>51.67 (19.30)</td>
<td>56.30 (21.96)</td>
</tr>
<tr>
<td>Post</td>
<td>31.5 (28.99)</td>
<td>27.67 (13.61)</td>
<td>37.67 (22.85)</td>
<td>32.50 (15.44)</td>
</tr>
<tr>
<td><strong>Quality Rating</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>1.75 (.64)</td>
<td>3.27 (3.06)</td>
<td>1.87 (.40)</td>
<td>2.12 (.63)</td>
</tr>
<tr>
<td>Post</td>
<td>3.95 (2.33)</td>
<td>3.03 (1.70)</td>
<td>3.57 (1.69)</td>
<td>4.17 (2.29)</td>
</tr>
<tr>
<td><strong>Negative Child Responses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>.50 (.71)</td>
<td>7.67 (7.50)</td>
<td>.33 (.58)</td>
<td>.70 (1.34)</td>
</tr>
<tr>
<td>Post</td>
<td>.00 (.00)</td>
<td>1.00 (1.73)</td>
<td>.00 (.00)</td>
<td>.10 (.32)</td>
</tr>
<tr>
<td><strong>Office Referrals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>.00 (.00)</td>
<td>.00 (.00)</td>
<td>.00 (.00)</td>
<td>.60 (.70)</td>
</tr>
<tr>
<td>Post</td>
<td>1.00 (1.41)</td>
<td>1.67 (2.89)</td>
<td>.00 (.00)</td>
<td>.90 (1.91)</td>
</tr>
<tr>
<td><strong>SST Referrals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>.50 (.71)</td>
<td>1.00 (1.00)</td>
<td>.67 (.58)</td>
<td>1.30 (.82)</td>
</tr>
<tr>
<td>Post</td>
<td>.50 (.71)</td>
<td>1.00 (1.73)</td>
<td>.00 (.00)</td>
<td>1.60 (1.84)</td>
</tr>
</tbody>
</table>
Descriptive Statistics

Descriptive statistics for the number of office referrals made for boys and girls prior to and following the intervention appear in Table 17. The range of referrals made for boys before teacher participation in Project PEGS! was 0 to 1 with a mean of .22 and a standard deviation of .43. The range of referrals made for girls prior to teacher participation in Project PEGS! was 0 to 1 with a mean of .06 and a standard deviation of .24. Following teacher participation in Project PEGS!, referrals made for boys and girls increased. The range was 0 to 6 and 0 to 2 for boys and girls respectively. The mean number of referrals made for boys was .78 and the standard deviation 1.80. The mean number of referrals made for girls was .11 and the standard deviation .47.

Inferential Statistics

A paired two-sample t-test was used to determine the difference between the means on pre and post measures when comparing the number of office referrals received by boys and girls before and after teacher participation in Project PEGS!. The difference between the number of office referrals received prior to the intervention and the number received afterward was not statistically significant for boys (t=-1.27, df=17, p≤.22) or girls (t=-0.43, df=17, p≤.67) at the .05 level of probability.

H09: Boys vs Girls SST Referrals

There was no statistically significant difference in the mean number of SST referrals received by boys and girls respectively in the third and fourth grade before and after teacher participation in Project PEGS!.
<table>
<thead>
<tr>
<th></th>
<th>Third Grade</th>
<th>Fourth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td><strong>range</strong></td>
<td>0-5</td>
<td>0-6</td>
</tr>
<tr>
<td><strong>mean</strong></td>
<td>.56</td>
<td>1.22</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.67</td>
<td>1.99</td>
</tr>
</tbody>
</table>

Table 13
DESCRIPTIVE STATISTICS FOR OFFICE REFERRALS
Table 14: Summary Table for One Way Analysis of Covariance for Post-Office Referral Scores (with Pre-Office Referral Scores as the Covariate) for Students in the Third Grade and for Students in the Fourth Grade

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>3.56</td>
<td>2</td>
<td>1.78</td>
<td>.51</td>
<td>.61</td>
</tr>
<tr>
<td>Intercept</td>
<td>15.08</td>
<td>1</td>
<td>15.08</td>
<td>4.33</td>
<td>.06</td>
</tr>
<tr>
<td>Pre-Office Referral</td>
<td>1.56</td>
<td>1</td>
<td>1.56</td>
<td>.47</td>
<td>.51</td>
</tr>
<tr>
<td>Grade</td>
<td>2.65</td>
<td>1</td>
<td>2.65</td>
<td>.76</td>
<td>.40</td>
</tr>
<tr>
<td>Error</td>
<td>52.22</td>
<td>15</td>
<td>3.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>70.00</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>55.78</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Descriptive Statistics

Descriptive statistics for the number of SST referrals made for boys and girls prior to and following the intervention appear in Table 18. The range of referrals made for boys before teacher participation in Project PEGS! was 0 to 2 with a mean of .78 and a standard deviation of .65. The range of referrals made for girls prior to teacher participation in Project PEGS! was 0 to 1 with a mean of .28 and a standard deviation of .46. Following teacher participation in Project PEGS!, referrals made for boys decreased. The range was 0 to 2 with a mean of .56 and a standard deviation of .78. The mean number of referrals made for girls increased. The range was 0 to 3. The mean was .56 and the standard deviation was .92.

Inferential Statistics

A paired two-sample t-test was conducted to determine the difference between the means when comparing the number of SST referrals received by boys and girls respectively before and after teacher participation in Project PEGS!. There was no statistically significant difference between the means (t=.94, df=17, p≤ .36) when considering boys only. Likewise, there was no statistically significant difference (t=-1.23, df=17, p≤ .24) in the case of girls.

Summary

In summary, following participation in Project PEGS teachers at both high and low SES schools demonstrated a decrease in the instances of interventions, an increase in the quality rating scores of interactions with students, and a decrease in negative child responses. Participation in the program appeared to have a similar impact
<table>
<thead>
<tr>
<th></th>
<th>Third Grade</th>
<th>Fourth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td><strong>range</strong></td>
<td>0-4</td>
<td>0-5</td>
</tr>
<tr>
<td><strong>mean</strong></td>
<td>1.44</td>
<td>.78</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.59</td>
<td>1.64</td>
</tr>
</tbody>
</table>
Table 16: Summary Table for One Way Analysis of Covariance for Post-SST Referral Scores (with Pre-SST Referral Scores as the Covariate) for Students in the Third Grade and for Students in the Fourth Grade

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>9.66</td>
<td>2</td>
<td>4.83</td>
<td>2.12</td>
<td>.15</td>
</tr>
<tr>
<td>Intercept</td>
<td>.16</td>
<td>1</td>
<td>.16</td>
<td>.07</td>
<td>.79</td>
</tr>
<tr>
<td>Pre-SST Referral</td>
<td>7.66</td>
<td>1</td>
<td>7.66</td>
<td>3.37</td>
<td>.09</td>
</tr>
<tr>
<td>Grade</td>
<td>5.32</td>
<td>1</td>
<td>5.32</td>
<td>2.34</td>
<td>.15</td>
</tr>
<tr>
<td>Error</td>
<td>34.12</td>
<td>15</td>
<td>2.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>66.00</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>43.78</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
at both the high or low SES school. Reliability of the data gathered by the observers may require further investigation as the two individuals agreed on one out of three observations when counting the frequency of interventions and on two out of three when rating the quality of interventions. Teachers at the high SES school were equally distributed according to communication style whereas a great number of individuals placed themselves in the $F$ quadrant at the low SES school. Participation in Project PEGS did not prove to greatly impact one group rather than another at either of the schools participating in the study. All null hypotheses regarding office and SST referrals were accepted as participation in Project PEGS did not result in a decrease in office or SST referrals made by third or fourth grade teachers concerning male or female students.

Discussion

Rival Hypotheses

There are three rival hypotheses that require further investigation. First, there were no statistically significant differences between the means on post observation measures regardless of student socioeconomic status, grade level, or sex. An alternative hypothesis might be that Project PEGS! was equally effective for all participants providing teachers with increased behavior management skills regardless of student differences. Future research should incorporate control groups to address the impact of confounding variables to better reflect the impact of the training program on teachers and students regardless of differences. Variables to be addressed include the discrepant length of teacher participation in Project PEGS!, differentiating practice sessions in which participants used a variety of skill levels as provided on the program, and greater procedural consistency regarding the number of individuals selected for participation.
Table 17

DESCRIPTIVE STATISTICS FOR OFFICE REFERRALS FOR BOYS AND GIRLS

<table>
<thead>
<tr>
<th></th>
<th>Boys (Pre)</th>
<th>Boys (Post)</th>
<th>Girls (Pre)</th>
<th>Girls (Post)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>range</td>
<td>0-1</td>
<td>0-6</td>
<td>0-1</td>
<td>0-2</td>
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<tr>
<td>mean</td>
<td>.22</td>
<td>.78</td>
<td>.06</td>
<td>.11</td>
</tr>
<tr>
<td>SD</td>
<td>.43</td>
<td>1.80</td>
<td>.24</td>
<td>.47</td>
</tr>
<tr>
<td>t</td>
<td>-1.27</td>
<td>-0.44</td>
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</tbody>
</table>
Secondly, statistically significant differences in the means of post observation measures were not noted when considering third and fourth grade students specifically. Due to increased academic demands and behavioral expectations on the part of educators and other adults, referrals to the office and SST typically increase as students move from the third to the fourth grade. Perhaps the anticipated increase did not occur due to the overall effectiveness of the Project PEGS! training tool. Future researchers should establish control groups consisting of teachers who are not exposed to Project PEGS! and experimental groups who are so that discrepancies among those groups are more evident. The lack of a control group to address the impact of possible confounding factors was the most serious limitation to the findings of the study.

Finally, the descriptive data regarding communication styles did not reflect noticeable differences among participants in the $S$, $E$, $L$, and $F$ categories. Two participants placed themselves in the $S$ category, three in the $E$ category, three in the $L$ category, and 12 in the $F$ category. Based on previous experience in schools on the part of the researcher, a disproportionate number of teachers do not act in a way that is representative of individuals in the $F$ category. A random distribution with approximately the same number of individuals in each of the four areas might more aptly portray the impact of the Project PEGS! training program on each of those populations. Future researchers may wish to complete the SELF Profile prior to collecting Project PEGS! data to ensure that an equal number of participants are placed in each of the four categories providing a more accurate picture of its true impact on individuals with differing communication styles.
<table>
<thead>
<tr>
<th></th>
<th>Boys (Pre)</th>
<th>Boys (Post)</th>
<th>Girls (Pre)</th>
<th>Girls (Post)</th>
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<tbody>
<tr>
<td><strong>n</strong></td>
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<tr>
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<td><strong>mean</strong></td>
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<tr>
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CHAPTER V
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter five summarizes the results of the study, states the conclusions drawn from the data collected, and presents recommendations for further investigation.

Summary

The purpose of the study was to increase teacher knowledge and skills on behavior management in third and fourth grade classrooms in a metropolitan area using Project PEGS!. The study also addressed whether or not improvements in behavior management techniques on the PEGS! Training tool might also correspond with a reduction in office and SST referrals. Correlations between performances on the PEGS! data and communication styles of participating teachers were also studied.

Third and fourth grade teacher participants were selected as typically office and SST referrals drastically increase at that time in the educational career of students. Three categories of information were analyzed using information gathered from pre and post Project PEGS! intervention data. Those categories included instances of intervention, quality rating scores, and negative child responses. Additional areas of investigation included the impact of the PEGS! training program on teachers and students from varying SES locations and on students according to gender. Another aspect of the study was the relationship between communication style and the difference scores prior to and following the intervention.

Research questions and data analysis focused on five primary areas: 1) Is there a statistically significant difference in the behavior management strategies of teachers before and after participating in Project PEGS according to the pre and post observations
scores (instances of intervention, quality rating scores, negative child responses)? 2) Is there a statistically significant difference between pre and post observation scores (instances of intervention, quality rating scores, and negative child responses) before and after participating in Project PEGS! according to the high and low SES groups? 3) Is there a statistically significant difference between pre and post observation scores (instances of interventions, quality rating scores, negative child responses) of specific groups designed according to communication style before and after participating in Project PEGS? 4) Is there a statistically significant difference between pre and post intervention office and SST referrals between third and fourth grade students respectively? 5) Is there a statistically significant difference between pre and post intervention office and SST referrals between male and female students respectively?

Findings

1) There was a statistically significant decrease in instances of intervention on pre and post observation measures for all participants.

2) There was a statistically significant increase in quality rating scores on pre and post observation measures for all participants.

3) There was no statistically significant decrease in negative child responses on pre and post observation measures for all participants.

4) On two of three observations, the differences of the means of the two observers were statistically significant when observing instances of teacher interventions.

5) On two of three observations, the differences of the means of the two observers were not statistically significant when assigning quality rating scores to teacher participants.
6) There was no statistically significant difference between post intervention rate of office and SST referrals among high and low SES schools.

7) According to descriptive data analysis, increases and/or decreases in the means of pre and post instances of intervention, quality rating scores, negative child responses, office referrals, and SST referrals were relatively consistent among communication style groups S, E, L, or F.

8) There were no statistically significant differences between post intervention rate of office and SST referrals among third and fourth grade teachers as well as boys and girls.

Recommendations

The generalization of the study was limited by the small sample size and the initial effectiveness of the two groups of participating teachers. According to observer A, both were “extremely impressed with the schools as students were amazingly well behaved and the teachers were some of the best I’ve seen in quite a while” (C. Combs, personal communication, October 2003). On the other hand, the initial competency of the two groups of teachers may also be seen as a positive aspect of the study as participants of this caliber demonstrated statistically significant gains after participation in the Project PEGS! training program. Greater gains might be observed with a less adept group of individuals in the area of behavior management. Recommendations for future research are as follows:

1) Continue to conduct studies regarding interrater reliability of Project PEGS particularly in the area of frequencies of teacher behaviors. Consistency among
observers is imperative to determine the impact of the program on teacher behavior management strategies.

2) Continue to investigate the relationship between the amounts of time spent using the PEGS! training tool and increases/decreases in pre and post observation scores as they relate to instances of ignoring, instances of intervention, quality rating scores, and negative child responses. The majority of participants in this study spent the minimal amount of time or less asked of them manipulating the instrument. Therefore, further analysis is necessary to determine if this might be a factor in effectiveness.

3) Investigate the relationship between pre and post observation scores (instances of interventions, quality rating scores, negative child responses) before and after participation in Project PEGS! and the number of students instructed in each time period of observation. In this study, participant A instructed the greatest number of students, 28, during the observation period prior to participation in Project PEGS! and 27 in the observation period following participation in Project PEGS!. Participant N instructed the lowest number of students teaching 15 in the observation period prior to participation in Project PEGS! and four in the observation session following participation in Project PEGS!. Data for participant A reflect no change in instances of ignoring (0 to 0) from pre to post observation, an increase in instances of intervention (35 to 38), a reduction in the quality rating score (66 to 44), an increase in negative teacher behaviors (0 to 4), and no change in negative student responses (0 to 0). Data on participant N demonstrated no change in instances of ignoring (0 to 0) regarding pre and post observation data, a reduction in the frequency of interventions (51 to 26), a slight reduction in quality rating
scores (120 to 116), and no change in negative teacher or student behaviors (0 to 0). It is unclear whether the number of students taught was a confounding variable in this study.

4) Continue to investigate the impact of the Project PEGS! training program on inexperienced versus experienced educators via longitudinal studies to determine the extent of its effectiveness on each group of individuals. It is important to understand the impact of the program on beginning teachers as so many schools with a high number of at-risk students educate the population with the least experienced teaching staff. This is evidenced by the fact that although both high and low SES schools were nearly proportionate in the number of teachers, 42 out of 97 (43%) at the low SES school were teachers with one to five years of experience. On the other hand, 26 out of 98 (26%) of the teachers at the high SES school had one to five years of experience. Likewise, 14 out of 97 (14%) teachers at the low SES school had a minimum of 11 to 15 years of experience. At the high SES school, 23 out of 98 (23%) had between 11 and 15 years of experience.

5) Survey inexperienced and experienced teachers to determine in what areas individuals feel most inept regarding behavior management and in what areas students feel teachers are most lacking. Based upon the information received, conduct longitudinal studies regarding the effects of monthly, face-to-face training sessions versus independent participation to improve teacher skills in the area of behavior management.

6) Examine the communication styles of teachers at all levels including elementary, middle, and high schools with high rates of office and/or SST referrals to determine if commonalities are present.
7) Examine the communication styles of students at all levels including elementary, middle, and high schools with high numbers of office and/or SST referrals to determine if commonalities are present.

8) Examine and compare the communication styles of boys and girls respectively to determine commonalities/differences furthering the body of research on male versus female interpersonal relationships in the school environment and the subsequent impact on academic performance.

9) Continue to investigate the relationship between pre and post observation scores (instances of interventions, quality rating scores, negative child responses) and corresponding office and SST referral data. Although inferential statistics did not reflect a significant difference on pre and post observation data, the frequency of referrals in some cases did increase as a greater number of referrals were issued in a shorter period of time following teacher participation in Project PEGS!. For example, the mean number of office referrals for third and fourth grade students increased from .22 to .55 and .33 to 1.22 respectively. The mean number of SST referrals for third grade students also increased from .78 to 1.4.

10) Examine other teacher training programs to determine if programs are available that explain more sophisticated and specific behavior management techniques (i.e. broken record techniques, “turtle” techniques) which might impact more skilled teachers to the extent that negative consequences are avoided. Participant D reported that “there were just a few instances where I felt that I tried everything with a kid, but nothing would take him that last step to have him enthusiastically participating. I would like to know specifically (not vaguely) what would have worked”. Although the data indicates that
participation in PEGS! did have a positive impact on teacher behavior by decreasing the instances of intervention, increasing quality rating scores, and decreasing negative child responses, comments such as these indicate teacher frustration with the strategies provided. In addition, positive performance on Project PEGS! was not definitively linked to other measures of increased behavior management skills via a decrease in office or SST referrals. Improvement in teacher behavior management strategies should be noted across all measures of student behavior.
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reassignment, migration, and attrition of special and general education teachers


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5-year longitudinal study. *Educational Psychology, 21*(1), 103-114.

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Elsworth, G.R. (1979, November) Aptitude by treatment interactions in the evaluation of
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<tr>
<td>Valdosta State University 2001-2002 (Professional Program=60 hours)</td>
<td>ECED 3400 (Early Childhood Education)</td>
<td>Planning for Instruction and Classroom Management</td>
<td>Fundamentals of teaching across all content area subject matter will be explored including models of teaching, lesson and unit planning, and creating a classroom environment that is conducive to learning.</td>
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<tr>
<td>ECED 3190 (Early Childhood Education)</td>
<td>Practicum I: Classroom Management &amp; Environmental Design Pre-K</td>
<td>Supervised classroom experience in selected pre-kindergarten and kindergarten classrooms. Students work under the supervision of mentor teachers and university supervisors. Emphasis will be on principles of classroom management and the arranged environment.</td>
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<tr>
<td>ECED 3690 (Early Childhood Education)</td>
<td>Practicum II: Classroom Management &amp; Design K-3</td>
<td>Supervised classroom experience in selected kindergarten through third grade classrooms. Students work under the supervision of mentor teachers and university supervisors. Emphasis will be on principles of classroom management and the arranged environment.</td>
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### B.S.ED. DEGREE WITH A MAJOR IN EARLY CHILDHOOD EDUCATION

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<td>ECED 4690</td>
<td>Practicum in Early Childhood Education II</td>
<td>Supervised classroom experience in selected third-grade through fifth-grade classrooms. Students work under the supervision of mentor teachers and university supervisors. Emphasis will be on principles of classroom management and the arranged environment.</td>
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<tr>
<td>SPEC 2000</td>
<td>Serving Students With Diverse Needs</td>
<td>Introduction to major issues in the field of special education. Emphasis is placed on understanding the characteristics and etiologies of individuals with diverse needs and on identifying the qualities of home, school and community environments that support these individuals in achieving their potential. Public school observation/participation in programs for students with disabilities is required.</td>
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<tr>
<td>EDEC 4030</td>
<td>Integrated Curricular Practices in Early Childhood Education</td>
<td>Develop philosophical perspectives of teaching and classroom management, consider effective parent-teacher relations, and connect with the wider community as a resource context for teaching and learning. Plan and teach an integrated, thematic curriculum unit for pre-kindergarten through grade five as part of the University of Georgia 2001-2002 (Professional Program=57 hours)</td>
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</table>
### B.S.ED. DEGREE WITH A MAJOR IN EARLY CHILDHOOD EDUCATION

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<td>EDEC 4030L</td>
<td>Integrated Curricular Practices in Early Childhood Education Laboratory</td>
<td>Same as above.</td>
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<td>SPED/EDEC 5100</td>
<td>Introduction to Early Childhood Special Education</td>
<td>Meeting individual needs of children with disabilities in early childhood education environments. Emphasis on methods for including young children with disabilities in typical environments. Topics include history and rationale for ECSE, family focused intervention, and methods for teaming embedding developmentally appropriate objectives in natural contexts.</td>
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<tr>
<td>SE 300</td>
<td>Exceptional Children and Youth</td>
<td>Definition of exceptionalities and introduction to children with disabilities in schools. The primary focus of this class is the educator’s role and responsibilities in meeting the needs of students with exceptionalities. The course covers characteristics, legal provisions, and pre-referral procedures, and instructional adaptations.</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Description</td>
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<tr>
<td>ED 308</td>
<td>Classroom Management</td>
<td>The application of psychological and interpersonal principles to a classroom setting to motivate students and manage their behavior.</td>
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</tr>
<tr>
<td>EDUC 305</td>
<td>Planning, Organizing, and Evaluating in ECE</td>
<td>This course will include the study and application of the basic techniques for planning, organizing and assessing instruction in early childhood, including the range of developmentally appropriate practices, activities, and materials for grades P-5. Students will learn and implement methods of evaluation, authentic assessment, and portfolio assessment.</td>
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</tr>
<tr>
<td>EDUC 383</td>
<td>Introduction to Special Education</td>
<td>This course presents a survey of the characteristics and process of identification of students with various disabilities. An overview of basic instructional strategies for teaching disabled students in the regular classroom setting will be provided. This course satisfies the requirement for Georgia certification.</td>
<td>3</td>
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### APPENDIX A

#### B.S.ED. DEGREE WITH A MAJOR IN EARLY CHILDHOOD EDUCATION

#### UNDERGRADUATE BULLETINS

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<th>Institution</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tr>
<td>Georgia College &amp; State University</td>
<td>EDEX 2210</td>
<td>Exceptional Individuals in the Regular Classroom</td>
<td>Focuses on the identification and basic techniques of teaching exceptional individuals in the regular classroom. Meets requirements of Georgia House Bill 671 for regular educators.</td>
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<tr>
<td></td>
<td>EDEC 3222</td>
<td>Managing the Early Childhood Classroom</td>
<td>Proactive strategies to manage behavior, time, and resources that support successful learning in the classroom.</td>
<td>2</td>
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<tr>
<td>Kennesaw State University</td>
<td>EDUC 3308</td>
<td>Learning, Motivation and Classroom Management</td>
<td>Examines theories, models, and principles of learning, motivation, and classroom management in schools. In level-specific modules, particular emphasis is placed on the application of theoretical principles to early childhood, middle grades, or secondary classroom settings. Addresses learning theories, motivational theories, learning styles and individual differences, and models and strategies for implementing effective systems of time, material, environment and behavior management in diverse classroom settings. Various technological applications, including the World Wide Web, e-mail, and presentation</td>
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### B.S.ED. Degree with a Major in Early Childhood Education

#### Undergraduate Bulletins

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<th>Course Description</th>
<th>Credits</th>
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<tr>
<td>EXC 3304</td>
<td>Education of Exceptional Students</td>
<td>Prepares students to serve as contributing members of pre-referral teams. Emphasized the characteristics of exceptional students as they function in today’s schools. This course places special focus on the identification of intellectual, emotional and social needs of exceptional students. This course requires an observational experience in an assigned school placement. Verification of professional liability insurance is required prior to placement in the field experience.</td>
<td>3</td>
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<tr>
<td>SPED 2706</td>
<td>Introduction to Special Education</td>
<td>Characteristics of exceptional children and youth and “best” teaching practices employed with these students will be examined.</td>
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<tr>
<td>ECED 3271</td>
<td>Classroom Management</td>
<td>Students will examine and observe theoretical constructs of classroom management for children in PREK through fifth grade. Students will also develop practice skills during a field-based experience to manage children, resources, instruction, curriculum, and facilities so to</td>
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## Piedmont College
### 2001-2002
(Professional Program=67 hours)

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<th>Course Code</th>
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<td>EDUC 355</td>
<td>Exceptional Children</td>
<td>Orientation to the understanding of atypical children: identification, etiology, characteristics, psychology and education of exceptional children. Includes hospital and homebound needs, family and professional guidance, and interpersonal relationships. Directed field-based experience required.</td>
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<tr>
<td>EDUC 390</td>
<td>Classroom Management</td>
<td>Review of classroom management techniques, <strong>behavioral</strong> modification, group dynamics, teacher-student interrelationships, leadership styles, peer group influences, appropriate punishment, crisis control, working with special students, student rights, teacher authority, and communication with parents and administration. Directed field-based experience is required.</td>
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## B.S. ED. Degree with a Major in Early Childhood Education
### Commonly Used Language in Course Descriptions

<table>
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<tr>
<th>Models of Teaching</th>
<th>Lesson Unit Planning</th>
<th>Arranged Environment</th>
<th>Supervised Classroom Experiences</th>
<th>Principles of Classroom Management</th>
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<th>Home, School and Community</th>
<th>Parent-Teacher Relationships</th>
<th>History of Early Childhood Special Education</th>
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APPENDIX C1

Adult code number: _____; Location code number: _____; Rater code number: _____
Pre Date: _____; First Activity: _____; Number students: _____; Second Activity: _____; OR Post Date: _____ First Activity: _____; Number students: _____; Second activity: _____; Number of students: _____

TIME SAMPLING WORKSHEET: ADULT STRATEGIES THAT FOSTER PARTICIPATION OF YOUNG CHILDREN

Directions: For 15 consecutive minutes observe the number of occurrence each minute of the 13 strategies listed. Code each occurrence as PP, NP, PN, or NN.

<table>
<thead>
<tr>
<th>Min.</th>
<th>Ignore Behavior</th>
<th>Motivate/ material/ activities</th>
<th>Praise &amp; encourage</th>
<th>Organize materials</th>
<th>Structure</th>
<th>Rules</th>
<th>Proximity</th>
<th>Reflect positive words/ act</th>
<th>Redirect to activity</th>
<th>Interpret feelings</th>
<th>Confront behavior</th>
<th>Remove from group</th>
<th>Remove from room</th>
<th>No strategy observed</th>
<th>Note Task/ Activity</th>
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Code PP if strategy was used in a positive way by the teacher and improved student participation.
Code PN if strategy was used in a positive way by the teacher, but did NOT improve student participation.
Code NP if strategy was used in a negative way by the teacher, but effectively improved student participation.
Code NN if strategy was used in a negative way by the teacher and did NOT improve student participation.
APPENDIX C2

Adult code number: ______; Location code number: _____; Rater code number:______
Pre Date: ____; First activity: ____; Number students: ____Second activity: ____ Number students: _____
Or
Post Date: _____; First activity: _____; Number students: _____; Second activity: _____Number students:

CHECKLIST OF ADULT STRATEGIES THAT FOSTER STUDENT PARTICIPATION

Directions: This list of 13 basic adult strategies includes items that have proven effective in increasing student participation in planned educational activities. As you observe, keep a tally of the number of occurrences of each strategy during the specified time period. Then, review the descriptive items within the strategy category and rate the quality of use of each time. Keep in mind that “effectiveness” is defined as positive participation of the students in the activity.

Circle PP if an item was used in a positive way by the teacher and effectively improved student participation.
Circle PN if the strategy was used in a positive way by the teacher, but did NOT effectively improve student participation.
Circle NP if the strategy was used in a negative way by the teacher, but effectively improved student participation.
Circle NN if the strategy was used in a negative way by the teacher and did NOT effectively improve student participation.
Circle NO if the strategy was not observed.
Circle UN if the strategy was observed but unnecessary to improve student participation.
Circle IN if the strategy was used inconsistently.

******************

Ignore Students’ Behavior

<table>
<thead>
<tr>
<th>Total Observations:</th>
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<tbody>
<tr>
<td>Adult appropriately ignores a student when the student is participating in the task.</td>
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<tr>
<td>Adult appropriately ignores a student’s behavior when the student is merely “testing” adult to elicit a reaction.</td>
</tr>
<tr>
<td>Adult does not ignore a student’s behavior when the student is in crisis or in need of adult assistance. (Circle PP if adult does not ignore student in crisis.)</td>
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Use Motivating Materials and Activities (Tasks)

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<tr>
<th>Total Observations:</th>
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<tbody>
<tr>
<td>Tasks promote interest and participation from the students.</td>
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<tr>
<td>Tasks are used to stimulate individual skills for success.</td>
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<tr>
<td>Tasks do not extend beyond peak of motivation. (Circle PP if task does not extend beyond peak.)</td>
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<tr>
<td>Tasks emphasize group processes and are motivating.</td>
</tr>
<tr>
<td>Tasks appear to have real-life relevance for the students.</td>
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</table>

Encourage and Praise

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<th>Total Observations:</th>
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<tr>
<td>Interpersonal forms of praise and encouragement are used frequently with all students.</td>
</tr>
<tr>
<td>Adult uses praise and positive statements rather than negative statements.</td>
</tr>
<tr>
<td>Students are assigned tasks which have opportunities for success.</td>
</tr>
</tbody>
</table>
Circle PP if an item was used in a positive way by the teacher and effectively improved student participation.
Circle PN if the strategy was used in a positive way by the teacher, but did NOT effectively improve student participation.
Circle NP if the strategy was used in a negative way by the teacher, but effectively improved student participation.
Circle NN if the strategy was used in a negative way by the teacher and did NOT effectively improve student participation.
Circle NO if the strategy was not observed.
Circle UN if the strategy was observed but unnecessary to improve student participation.
Circle IN if the strategy was used inconsistently.

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<tr>
<th>Organize Materials</th>
<th>Total Observations:</th>
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<tr>
<td>Control of materials by adult is used to avoid problems.</td>
<td>PP PN NP NN NO UN IN</td>
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<tr>
<td>Materials are organized for success with the task.</td>
<td>PP PN NP NN NO UN IN</td>
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<tr>
<td>Adult allows students freedom to handle materials to encourage participation.</td>
<td>PP PN NP NN NO UN IN</td>
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<tr>
<th>Provide Students with Clear Expectations (Structure)</th>
<th>Total Observations:</th>
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<td>Activities requiring physical movement are interspersed with those which are less active.</td>
<td>PP PN NP NN NO UN IN</td>
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<tr>
<td>Before activity begins, adult “talk through”/demonstrates the activity, when necessary, so each student understands the task.</td>
<td>PP PN NP NN NO UN IN</td>
</tr>
<tr>
<td>Students know the behaviors expected in each activity.</td>
<td>PP PN NP NN NO UN IN</td>
</tr>
<tr>
<td>Adults describe procedures to provide students with behavioral guidelines.</td>
<td>PP PN NP NN NO UN IN</td>
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<th>Remind Students of Rules</th>
<th>Total Observations:</th>
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<td>Rules are “meaningful” and developmentally appropriate.</td>
<td>PP PN NP NN NO UN IN</td>
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<tr>
<td>Classroom rules are few and stated positively.</td>
<td>PP PN NP NN NO UN IN</td>
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<tr>
<td>Classroom rules focus on helping students be successful.</td>
<td>PP PN NP NN NO UN IN</td>
</tr>
<tr>
<td>Consequences for breaking rules are stated constructively.</td>
<td>PP PN NP NN NO UN IN</td>
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<th>Move Close to Students to Convey Awareness (Proximity)</th>
<th>Total Observations:</th>
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<tbody>
<tr>
<td>Adult moves near students as needed.</td>
<td>PP PN NP NN NO UN IN</td>
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<th>Reflect Students’ Positive Words or Actions</th>
<th>Total Observations:</th>
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<td>Small accomplishments are recognized.</td>
<td>PP PN NP NN NO UN IN</td>
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<tr>
<td>Adult conveys personal recognition of students as important individuals.</td>
<td>PP PN NP NN NO UN IN</td>
</tr>
<tr>
<td>Adult reflects on the positive qualities in students.</td>
<td>PP PN NP NN NO UN IN</td>
</tr>
<tr>
<td>Adult reflects what students are feeling to convey understanding.</td>
<td>PP PN NP NN NO UN IN</td>
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Strategies Checklist, page 2 of 3
Circle **PP** if an item was used in a positive way by the teacher and effectively improved student participation.
Circle **PN** if the strategy was used in a positive way by the teacher, but did NOT effectively improve student participation.
Circle **NP** if the strategy was used in a negative way by the teacher, but effectively improved student participation.
Circle **NN** if the strategy was used in a negative way by the teacher and did NOT effectively improve student participation.
Circle **NO** if the strategy was not observed.
Circle **UN** if the strategy was observed but unnecessary to improve student participation.
Circle **IN** if the strategy was used inconsistently.

**Redirect Students to Activity**

| Adult uses redirection, statements, or questions. | PP | PN | NP | NN | NO | UN | IN |
| Adult responds to a student’s inappropriate comments with a question or refocuses student on task. | PP | PN | NP | NN | NO | UN | IN |
| Adult responds to a student’s inappropriate request with a question. | PP | PN | NP | NN | NO | UN | IN |

**Interpret Feelings in Students’ Words and Actions**

| Interpretation is used when appropriate and does not require a response from the student. | PP | PN | NP | NN | NO | UN | IN |
| Adult recognizes feelings of a student and conveys understanding. | PP | PN | NP | NN | NO | UN | IN |

**Confront Unacceptable Behavior**

| Adult speaks firmly and without emotion. | PP | PN | NP | NN | NO | UN | IN |
| Confrontation is used only when necessary to control disruptive behavior. | PP | PN | NP | NN | NO | UN | IN |

**Remove from the Group (Time-out)**

| Time-out from the group, in room, is used if needed. | PP | PN | NP | NN | NO | UN | IN |
| Student understands why he/she was sent to time-out. | PP | PN | NP | NN | NO | UN | IN |
| The interpersonal exchange between student and adult is positive. | PP | PN | NP | NN | NO | UN | IN |
| Time-out is brief and results in student’s participation. | PP | PN | NP | NN | NO | UN | IN |

**Remove from the Room**

| Removal from the room is used when needed. | PP | PN | NP | NN | NO | UN | IN |
| Student is removed because h/she is out of control and my harm self or others, or topic is so private that student cannot discuss it in front of the group. (Circle PP if the adult removes the student for appropriate reasons.) | PP | PN | NP | NN | NO | UN | IN |
| The student understands why he/she was removed from the room. | PP | PN | NP | NN | NO | UN | IN |
| The interpersonal exchange between the student and the adult is positive and ends on a positive note. (Student returns to group and participates.) | PP | PN | NP | NN | NO | UN | IN |